

GENERAL STATISTICS / CHAPTER

SALES ORDER		*Revised:	13 May 1963
Sold To:	S. A. Empreza de Viação Verea Rio Grandense- VARIG	Date:	13 May 1963
Reference:	(a) VARIG P.O. 10-2167 (b) Convair S.O. 600-8-85 (c) BIM No. 3-199 (d) Memo Hendricks to Bigges 13 May 1963	S. O. No:	600-8-88

REMOVAL OF HYDROLOCK CYLINDERS FROM VARIG 990A AIRCRAFT, PRODUCTION NO 20, AND REINSTALLATION OF HYDROLOCK CYLINDERS REMOVED FROM VARIG NO. 19 AIRCRAFT

◀ Back to Home Page ▶

\*Revised to add Ref. (d) amend para 2 and add para 3. GDC:am

cc: S. D. File  
B. H. Wilbur

RECEIVED

MAY 16 '63

Item	Description	Quantity	Rate	Amount	Revised	Date
1. To:	S. A. Empress, or similar Areas Rio Grande do Sul - Brazil					
2. (a) Fuel & Lubricating Oil		100	0.02	2.00		
2. (b) Lub/C Service fee 250000 Reis		100	0.02	2.00		

## FREIGHT CHARGE - 1.0000000000000001

All charges and expenses mentioned in previous item are subject to the following deductions as follows:

Prod. Order No. 171-09-08

20 April 1963 (17-520) and 20 April 1963 (17-521)  
(EMCO 171-15) FOB Rio

Production No. 171-09-09

20 April 1963 (17-522) and 20 April 1963 (17-523)  
(EMCO 171-15)

Production No. 171-09-10

20 April 1963 (17-524) and 20 April 1963 (17-525)  
(EMCO 171-15) FOB Rio

5. All forward invoices will read as follows:

6. Changes for above Fuel and oil are as follows: Fuel \$2.00 per gallon  
Oil \$5.05 per gallon

\*Revised to amend para 1 and para 3. GOC:ms

## GENERAL DYNAMICS/CONVAIR

SALES ORDER

Sold To:	S.A. Empresa de Viaoao Aerea Rio Grandense - VARIG	Date:	26 April 1963
Reference:	(a) Letter Agmt. 11-0-750 accepted and agreed to 4/25/63	S. O. No:	600-8-87
		W. O. No:	31,744

FERRY OF VARIG 990 A AIRCRAFT PRODUCTION NO. 20, PP-VJG  
FROM SAN DIEGO TO PORTO ALEGRE, BRAZIL

1. In accordance with reference (a) above, all concerned are hereby authorized to take steps necessary to ferry VARIG 990A Aircraft, Production No. 20, Registration No. PP-VJG from San Diego, California to Porto Alegre, Brazil on or about April 27.
2. Convair is to furnish a Flight Captain and a Senior Flight Engineer for the purpose of conducting the ferry flight subsequent to redelivery of said aircraft to VARIG.
3. VARIG will provide or reimburse Convair for the first class return air transportation for Convair's flight personnel from Porto Alegre, Brazil to San Diego, California, upon completion of the ferry flight.
4. VARIG is to furnish a copilot, provide all fuel, oil and maintenance for the aircraft and pay all landing fees in connection with said ferry flight.
5. Upon completion of delivery of the aircraft to Porto Alegre, Brazil and return of Convair Flight Captain and Senior Flight Engineer to San Diego, California, VARIG is to be invoiced in the amount of \$2,255 representing salaries, fringe benefits, per diem and other expenses of Convair personnel conducting the ferry flight.
6. VARIG has agreed to indemnify and save Convair harmless from all loss, costs, etc., in connection with the ferry flight.

RECEIVED

APR 30 '63

GDC:am

cc: S. O. File

Leg No. 833

*G. D. Clark*  
 for D. H. Digges  
 Director of Contracts

SALES ORDER		***Revised:	30 August 1963
Salto Int.	S.A. Empresa de Voo Aerea Rio Grandense - VARIG	Revised:	25 June 1963
		Date:	24 April 1963
		S. O. No.	600-8-86
Reference:	(a) Letter Agmt. betwn VARIG and GD/Convair 11-0-747 accepted on 18 Apr 1963 (b) S. O. 600-8-84 (Ferry of VARIG 990, Production No. 19)	W. O. No.	31.742

(b) Report of Letter, R. P. Prentiss, Varig to G. G. Clark, GD/Convair

#### SUPPLEMENTARY FLIGHT TRAINING IN BRAZIL FOR VARIG

1. In accordance with Reference (a) above, all concerned are authorized to furnish a second Convair pilot instructor and a second Convair flight engineer instructor to assist VARIG in the 990 flight training program in Porto Alegre, Brazil. Said pilot instructor and flight engineer conducted the ferry of VARIG aircraft 990, production No. 19 to Porto Alegre, Brazil in accordance with Reference (b) above.
2. Both Convair instructors are authorized to ride in the cockpit of the aircraft during passenger flights.
3. VARIG shall be invoiced for the above services as follows:

Commencing on 16 April 1963, \$3,990 per month or pro rata portion thereof for the pilot instructor, and

\$1,030 per month or pro rata portion thereof for flight engineer

instructor, to and including June 22 the date the instructors returned to

Said charges will be prorated on the basis of a 30 day month.

San Diego after completion of the supplemental flight training program.

4. VARIG shall furnish or reimburse Convair for first-class return air transportation for Convair's pilot and flight engineer instructor, upon completion of the flight training program.

5. Accounting Department is instructed to prepare invoices covering the above services and forward same to Contracts Department for transmittal to VARIG.

GDC:am

\*\*\*Revised to amend para 3 and add para 5. GDC:am *hj*

\*\*\* Revised to add para. 7. GDC:jav *hj*

cc: W. B. Harwell

Log No. 817 1196 PH6 1557

*G. D. Clark*  
for D. H. Biggs  
Director of Contracts

GENERAL DYNAMICS/CONVAIR

SALES ORDER # 600-8-86  
Page 2

W O : 31,742  
8/22/63

\*\*6. The Convair pilot instructor and Convair flight engineer instructor whose services were covered hereto were Messrs. A. P. Wilson and L. Knudsen. Upon termination of their services in accordance with paragraph 3, above, Varig provided the Convair pilot instructor and Convair flight engineer instructor with first class airline tickets from Porto Alegre, Brazil to San Diego, California. Therefore, meeting the terms of paragraph 4, above.

\*\*7. This sales order is cancelled herewith and no further charges are authorized herunder.

hil

## GENERAL DYNAMICS/CONVAIR

## SALES ORDER

Sold To:	S. A. Empresa de Viaoao Aerea Rio Grandense - VARIG	*Revised:	19 April 1963
		Date:	10 April 1963
Reference:	(a) VARIG P O. #10-2164 *(b) Memo D. H. Digges from A. L. Hendricks dtd. 4/18/63 (BIN 3-149)	S. O. No:	600-8-85
		W. O. No:	31739

REMOVAL OF HYDROLOCK CYLINDERS FROM FIRST  
CLASS SEATS IN 990A AIRPLANE, PRODUCTION NO. 19,  
REGISTRATION NO PP-VJF

1. In accordance with Reference (a) above, all concerned are hereby authorized to remove all first class seat Hydrolock Cylinders, leaving control arms on the seats, from aircraft 990A, Production No. 19, Registration No. PP-VJF, and deliver same to Mr. C. B. Edmonds, U. S. Maintenance Manager, Varig Airlines. A maximum of 50 manhours is authorized hereunder.
- \*2. In accordance with Reference (b) above, the Accounting Department is hereby authorized to invoice VARIG in the amount of \$376.00 representing costs plus profit for the task involved in paragraph 1 above.

GDC am \*Revised to add Ref. (b) and add para 2. GDC:am *hsl*

cc: S. O. File

Log No. 242 810

*D. H. Digges*  
D. H. Digges  
Director of Contracts

SALES ORDER

Sold To:	S. A. Empresa de Viacao Aerea Rio Grandense - VARIG	* Revised: Date:	30 August 1963 8 April 1963
Reference:	(a) Letter Agreement between VARIG and GD/Convair accepted and agreed to 1 April 1963	S. O. No:	600-8-84
		W. O. No:	31732

FERRY OF VARIG 990 AIRCRAFT, PRODUCTION NO. 19. PP-VJF  
FROM SAN DIEGO TO PORTO ALEGRE, BRAZIL

1. In accordance with Reference (a) above, all concerned are hereby authorized to take all steps necessary to ferry Varig 990 aircraft, Production No. 19, Registration No. PP-VJF, from San Diego, California, to Porto Alegre, Brazil, on or about Thursday, April 12.
2. Convair is to furnish a Flight Captain and a Senior Flight Engineer for the purpose of conducting the ferry flight subsequent to redelivery of said aircraft to VARIG.
3. VARIG will provide or reimburse Convair for the first class return air transportation for Convair's flight personnel from Porto Alegre, Brazil to San Diego, California upon completion of the ferry flight.
4. VARIG is to furnish a copilot, provide all fuel, oil and maintenance for the aircraft and pay all landing fees in connection with said ferry flight.
5. Upon completion of delivery of the aircraft to Porto Alegre, Brazil and return of Convair Flight Captain and Senior Flight Engineer to San Diego, California, VARIG is to be invoiced in the amount of \$2,255 representing salaries, fringe benefits, per diem, and other expenses of Convair personnel conducting the ferry flight.
6. VARIG has agreed to indemnify and save Convair harmless from all loss, costs, etc., in connection with the ferry flight.
7. This sales order is cancelled herewith and no further charges are authorized hereunder.

GDC:am \* Revised to add para. 7. GDC:jaw *hsl*

cc: S. O. File

Log No. 725-1556

*D. H. Digges*  
Dr. D. H. Digges  
Director of Contracts

## GENERAL DYNAMICS/CONVAIR

## SALES ORDER

Sold To: S. A. Empresa de Vias Aerea  
Rio Grandense - VARIG

\*\*Revised  
Date:

10 April 1963  
1 April 1963

Reference: (a) Verbal request E. B. Edmonds,  
VARIG, to E. L. McDonald, Convair  
(b) VARIG P. O. #10-2165

S. O. No: 600-8 83  
W. O. No: 31727  
31738

LOADING OF VENDOR AND CONVAIR SPARES  
ABOARD MODEL 30A, PRODUCTION NOS. 13/19/20

1. In accordance with Reference (a) above, all concerned are hereby authorized to assist VARIG personnel in loading 990 vendor and Convair proprietary spares aboard aircraft Model 30A, Production Nos. 13/19/20. All work relating to this task is to be charged to Work Order 31727.
2. All concerned are authorized to assist VARIG in loading CFE equipment, consisting of Self manufactured galleys, aboard aircraft Model 30A, Production Nos. 13/19/20. All work relating to this task is to be charged against Work Order 31738.
3. Task described in paragraph 2 was completed on all three aircraft as of Wednesday, April 24, 1963.
4. Accounting Department is hereby instructed to invoice VARIG in the amount of \$6,183 covering the task described in paragraph 2 and in accordance with VARIG Purchase Order #10-2165, Reference (b) above.

RECEIVED  
APR 30 '63

GDC:am

\*Revised to add Reference (b). GDC:am *Al*\*\*Revised to add para. 3 and 4. GDC:am *Al*

cc: Distribution

E. J. Elliott  
S. O. File

Log No. 842 832

*J. D. Clark*  
J. D. Clark  
Director of Contracts

\*\*\*\*Revised: 30 August 1963

SALES ORDERRevised: 23 April 1963  
Date: 2 March 1963Sold to: S.A. Empreend. de Vias e Áreas  
Rio Grandense - VARIG

S.O. No. 100-6-12

Reference: (a) Letter Agreement b/wn VARIG  
Airlines & General Dynamics  
dtd 3/22/63

V.G. No. 717

FLIGHT TRAINING IN BRAZIL FOR VARIG

1. In accordance with Reference (a) above all concerned are with regard to function one (1) CD/Convair Pilot Instructor and one (1) GD/Convair Flight Engineer Instructor to accompany the first redelivered modified 990A aircraft to Porto Alegre, Brazil and remain for a period of approximately three months to assist VARIG in Flight Training Program. Said Convair instructors are authorized to ride in the cockpit of the aircraft on scheduled passenger revenue flights.
2. VARIG shall be invoiced for the above services as follows:
  - \$3,990 per month or pro rata portion thereof for the Pilot Instructor and \$3,030 per month or pro rata portion thereof for Flight Engineer Instructor. These charges will be pro-rated on the basis of a 30-day month.
  - 3. VARIG shall furnish or reimburse Convair for first-class rail and air transportation for Convair's Pilot and Flight Engineer Instructors up to the end of the flight training program.
4. Charges for the services itemized in paragraph 2 are to commence on April 1, 1963.
5. The flight training program will be conducted in accordance with the following schedule: (1) Initial indoctrination of the flight instructors in the United States and Brazil for a period of one month. (2) Initial indoctrination of the flight engineers in the United States and Brazil for a period of one month. (3) Initial indoctrination of the flight training program in Brazil for a period of one month. (4) Actual flight training in Brazil for a period of approximately three months.
6. According to contract to S.A. Varig for the pilot instructors no charge will be made when services were terminated, in accordance with para 2.
7. Please see para 2.

GD/Cms: \*Revised to amend para 2 and to add para 4. GDC:am *dag*  
Log No. 467-12-2282 145b 1555

*dag* *dag*  
John H. Wagner  
Int'l. Sales Manager

GENERAL DYNAMICS/CONVAIR

SALES ORDER

PAGE 2

Sold to: S. A. Empresa de Viasao Aerea  
Rio Grandense - VARIG

S. O.: 600-8-82

W. O. # 31,727

\*\*\*\*\* Revised to add para. 9. GDC:jaw/jet

\*\*\*\*\* Revised to add para. 9. GDC:jaw/jet

*J. L. T. T.*  
John L. T. T.  
Manager of Sales

SALES ORDER

Sold to: S. A. Empresa de Viacao Aerea  
Rio Grandense - VARIG Date: 21 March 1963

Reference: (a) Verbal request from G. G. Herzfeldt  
Director of Maintenance S. O. No. 600-8-81

W. O. No. 31-313

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REMOVAL OF PASSENGER SEATS FROM MODEL 30  
PRODUCTION NO. 13 FOR ADVANCE SHIPMENT TO BRAZIL

1. In accordance with Reference (a) above all concerned, including but not limited to Departments 48-01 and 171, are hereby instructed to remove the following item from VARIG 990, Aircraft 10-13 and deliver to Mr. Herzfeldt for advance air shipment to Brazil:

One double first class seat, S/N 5, from Production No. 10-13, P/N 30-94553-883.

2. The above item is to be shown as a shortage on the equipment list with the following statement, "This item removed from the aircraft for advance shipment to Brazil at customer's request".

3. All labor charges relating to this task and Work Order No. 31-313 must reference this Sales Order No. 600-8-81.

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GDC:mgLog No. 636  
D. H. Digges  
Director of Contracts

GENERAL DYNAMICS/CONVAIR

SALES ORDER

Sold to: S.A. Empresa de Viacao Aerea  
Rio Grandense - VARIG

Date: 19 March 1963

Reference: (a) Telephone request from  
C. B. Edmonds

S.O. No. 600-8-80

W.O. No. 31,000 Series

CUSTOMER VENDED EQUIPMENT

1. All concerned are hereby authorized to receive 3 each Flight recorders, Convair P/N 97-31501-003 and vendor P/N 100600-200-9 from GD/Convair Service Parts and install in VARIG aircraft 30A, Production Nos. 13, 19 and 20 as customer vended equipment.

2. The detail specification and handbooks shall not be revised to include this equipment.

GDC:mg

Log No. 628

*H. D. Clark*  
D. H. Digges  
Director of Contracts

SALES ORDERSold to: S. A. Empresa de Vacao Aereo  
Rio Grandense (VARIG)

Date: 14 March 1963

S.O. No. 600-8-79

W.O. No. 31709

RECYCLING OF VENDED ITEMS FOR UPDATING,  
INSPECTION, RECERTIFICATION AS REQUIRED

1. This Sales Order authorizes departments concerned to take whatever action is necessary to rotate all vended items that require updating or inspection prior to submittal of aircraft Production Nos. 13, 19 and 20 to the customer. This authorization is limited to life rafts, life vests and CO<sub>2</sub> cylinders installed in life rafts.
2. This activity is to be accomplished in accordance with program schedule 4EJ-512.
3. Contract delivery schedules must not be affected by the work performed pursuant to this authorization.

RECFIVED

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GDC:mg

Log No. 588

  
D. H. Digges  
Director of Contracts

**SALES ORDER**

Sold to: REAL S/A-Transportes Aereos and  
Empresa de Transportes Aerovias  
Brazil S/A  
S. A. Empresa de Viao Aerea  
Rio Grandense (VARIG)

Date: 11 March 1963  
S.O. No. 600-8-78  
W.O. No. 31,000 Series

Reference: (a) Amend. No. 9 to Purchase Agreement  
btwn Convair & VARIG dtd 3/1/63

## SERVICES, TRAINING, ETC.

1. In accordance with Reference (a) above, all concerned are hereby authorized to provide VARIG with services, etc. as follows:

- a) Field service representation in Brazil for a period of 12 months after delivery of VARIG's third 990 aircraft.
- b) A maintenance training program at Convair-San Diego consisting of one course made up of two classes. Instruction not to exceed 960 instructor hours.
- c) Provide VARIG with one reproducible copy of Service Training Study Guide plus one copy of same to each of VARIG's trainees along with appropriate training material.

GDC:mg

Log No. 538

*H. D. Clark*  
for D. H. Digges  
Director of Contracts

REAL/VARIG MINUTES

15 March 1963

Reference: (a) Amend. No. 9 to Purchase Agreement between Convair and Varig dated 3-1-63  
(b) Sales Order No. 600-8-78 dated 11 March 1963

Subject: SERVICES, TRAINING, ETC.

1. In accordance with Reference (b) above, all concerned are hereby authorized to provide Varig with services as follows:
  - a. Field Service representation in Brazil for a period of 12 months after delivery of Varig's third 990 aircraft.
  - b. A maintenance training program at Convair-San Diego consisting of one course made up of two classes. Instruction not to exceed 960 instructor hours.
  - c. Provide Varig with one reproducible copy of Service Training Study Guide plus one copy of same to each of Varig's trainees along with appropriate training material.

ACTION: Engineering to proceed accordingly.



A. J. Savard  
880/990 Program Manager

GENERAL DYNAMICS/CONVAIR

SALES ORDER

Sold to:	REAL S/A- Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A S. A. Empresa de Viacao Aerea Rio Grandense (VARIG)	Date:	1 March 1963
		S. O. No.	600-8-77
		W. O. No.	31,000 Series

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SHIPMENT OF CONSTANT SPEED DRIVE UNITS  
TO GENERAL ELECTRIC

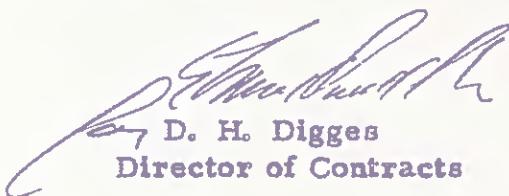
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1. This Sales Order authorizes Departments concerned to take whatever action is necessary to rotate the constant speed drive units to General Electric at Ontario for inspection and repair as required to preserve the warranty of these units subsequent to delivery of the Varig aircraft.
2. This activity is to be accomplished in accordance with program schedule 4EJ-512.
3. Contract delivery schedules are not affected by the work performed pursuant to this authorization.

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ELM:ls

Log No. 520



D. H. Digges  
Director of Contracts

GENERAL DYNAMICS/CONVAIR

SALES ORDER

Sold to:	REAL S/A-Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A S. A. Empresa de Viacao Aerea Rio Grandense (VARIG)	Date:	1 March 1963
		S. O. No.	600-8-76
		W. O. No.	31,000 Series

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SHIPMENT OF AIR CONDITIONING COMPONENTS  
TO HAMILTON STANDARD

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1. This Sales Order authorizes Departments concerned to take whatever action is necessary to rotate the air conditioning components to Hamilton Standard for updating to preserve the warranty of these units subsequent to delivery of the Varig aircraft.
2. It is understood that such components will be updated by Hamilton Standard at no charge to Convair. The updated units are to be installed in Varig aircraft Nos. 10-13, 10-19 and 10-20 prior to delivery in accordance with program schedule 4EJ-512.
3. Contract delivery schedules are not affected by the work performed pursuant to this authorization.

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ELM:ls

Log. No. 519

  
D. H. Digges  
Director of Contracts

THE BOSTONIAN

\* Revised: 11 March 1963  
\* Revised: 25 February 1966

15.1.50 - 1965; n = 100; Average Date	6 February	9
and 50% of the sample		
values between 5.0	5.1 hrs.	60.13-75
and 50% of the Average		
The Standard Deviation	8.0 hrs.	31.00 Series

✓ Experiment between W. H. Conrad  
and G. and J. Macdonald, 1963. P  
selected by G. and J. Macdonald  
February 1963.

✓ Experiment between J. T. Macdonald,  
and G. Macdonald and H. Biggs, 1963  
February 1963.

(c) Telecon between C. Z. German & E. L. McDonald 2/25/63  
(d) Memo R. L. Meilison to E. L. McDonald dtd 3/5/63

SHIPMENT OF 5-CAFE ENGINES  
TO ONTARIO - VARIS

8 (c) 8

17. Pursuant to references (a) and (b), this Sales Order authorizes Department  
of Defense to ship the following C1305-23B engines to Ontario for incorporation  
into service bulletins secured by General Electric in anticipation of the ultimate  
shipment of said engines to Varyag.

GE-E4-4-170 GE-E414-4-144  
GE-F4-4-160 GE-E414-178  
GE-F414-161 GE-E414-179  
GE-E4-4-179 GE-E414-181

Material Department is requested to ship these engines on a consignment basis in order to Ontario as soon as possible, such consignment to contain a full schedule.

~~\*Revised to add ref (c) & amend para 1~~

5. *W. H. Digges*  
W. H. Digges  
Director of Contracts

GENERAL DYNAMICS CONVAIR

Sold to. REDE AEREA - Transportes Aereos  
a v. Empresa do Transportes  
Aeroviario Brasil S/A

\* S.A. IMPRESA de VIACAO AREA RIO  
GRANDENSE

Reference. (a) Telephone conversation between W. L. McDonald and G. D. Clark  
17 January 1963  
(b) TWR - C. B. Edmonds (VARIG) to  
G. D. Clark dated 15 January 1963  
\* (c) CCP No. 62  
\* (d) Sales Order 600-8-73

SALES ORDER

\* Revised: 6 February 1963

DATE 17 February 1963

S. O. No. 600-8-73

CONVAIR 990 - REAL / VARIG

CCP NO. 62

(c) \*

all

(1) In accordance with reference (c) above, this Sales Order authorizes the Engineering and Purchasing Departments to proceed in accordance with the instrument switching modification as covered by MCL 30-62, 119, to the extent and as paragraph (2) -

(2) - An aggregate limit not to exceed \$2,000 covering engines and purchased -  
- parts for instrument boundaries -

\*(3) Reference (c) was accepted by the customer on 4 February in accordance with the terms thereof.

\*(4) Reference (c) above results in one weeks delay in submittal of each aircraft as previously indicated in reference (d).

\*(5) Engineering Specification Section will provide the Contracts Department with revised spec. pages.

GDC:mg

Log No. 216 351

27-1-63

D. H. Digges  
Director of Contracts

\*Revised to add refs. (c) and (d), amend para. 1,  
delete para 2, and add paras. 3, 4, and 5. GDC:mg

REAL/VARIG MINUTES21 January 1963  
Revised 6 February 1963

Reference: (a) Telephone conversation, E. L. McDonald and G. D. Clark  
17 January 1963  
(b) TWX - C. B. Edmonds (VARIG) to G. D. Clark dated  
15 January 1963  
(c) Sales Order No. 600-8-74, dated 17 January 1963  
revised 6 February 1963

Subject: INSTRUMENT SWITCH REVISION No.-2

In accordance with reference (c) above, all departments are authorized to proceed with the instrument switching modification as covered by MCL 30-62, 129.

ACTION: Engineering is hereby authorized to proceed and Specification Section will forward revised specification pages to Contracts Department as soon as practicable.

  
A. J. Savard  
880/990 Program ManagerRECEIVED  
FEB 8'63

~~6-122B~~  
6-122B

GENERAL DYNAMICS CONVAIR

SALES ORDER

Sold to: REAL S A- Transportes Aereos and  
Eisenhaua de Transportes Ferroviarias  
Brazil S A  
S A. Empresaria de Vias de Aerea  
Rio Grandense (VARIG)

\*Revised: 7 February 1963  
Date: 9 December 1962  
S. O. No. 600-8-73  
W. O. No. 31,000 Series

Reference: (a) Telephone conversation between  
C. Z. German and F. L. McDonald  
ca 18 December 1962  
\*(b) CCP No. 62  
\*\*\*(c) Sales Order 600-8-74

RECEIVED

FEB 8'63

CONVAIR 990 - REAL VARIG  
DELIVERY OF VARIG AIRCRAFT

1. This Sales Order cancels and supersedes Sales Order No. 600-0-46, and authorizes all departments concerned to proceed with the completion of the Varig Aircraft with Swissair drag improvements for delivery to Varig in accordance with the following schedule:

March 1963	1
April 1963	2

2. The above deliveries are based on the following submittal dates:

\* 21

Airplane No. 13	-14 March 1963
Airplane No. 19	28- <del>March</del> 4 April 1963 *
Airplane No. 20	-1 April 1963

\* 18

\* 3. In accordance with the terms of References (b) and (c) above, the submittal dates of paragraph 2 above have been revised as indicated.

\*Revised to add Ref. (b) and (c), amend para 2  
1 add para 3. GDC:mg

*D. H. Digges*  
D. H. Digges  
Manager of Contracts

REAL/VARIG MINUTES

December 14, 1962

Revised December 27, 1962

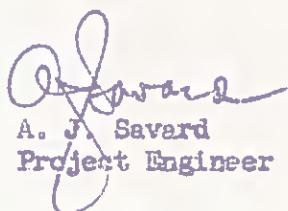
Reference: (a) V. Cernuto Memo dated 12-13-62  
(b) S.O. No. 600-8-73 dated 19 December 1962

Subject: Change in external configuration - AA to Swissair

Per Reference (a), authorization has been received to configure  
Ships 30-10, Nos. 13, 19 and 20, from Model 5 configuration to  
Model 6 configuration, externally.

The delivery dates for these airplanes are targeted for two (2)  
in March 1963 and one (1) in April 1963.

ACTION: These Minutes authorize Engineering Design Groups to  
modify existing releases for Varig in accordance  
with the above.



A. J. Savard  
Project Engineer

RECEIVED

DEC 28 '62

DATA &  
PROCEDURES  
ADMIN.

GENERAL DYNAMICS/CONVAIR

**SALES ORDER**

Date 19 July 1962

SO No: 600-8-71

Reference: (2) CFO 62-212

WO No: 31,000 Series

# CONVAIR 990 - REAL/VARIG IMPROVED OPERATIONAL PERFORMANCE

(1) Reference (a) outlines the task in connection with incorporation in the Model 30 Flight Manual certain improved operational performance for the aircraft.

(2) All concerned are hereby authorized to take necessary action to revise the FAA approved Flight Manual and to obtain FAA approval for said revisions in order to accomplish the following for the unmodified Model 30-8 aircraft:

1. Determine and certify improved take-off performance available from
  - A. use of increased thrust for second segment climb and
  - B. optimization of  $V_F$  speeds for two critical airport conditions.
2. Otherwise complete the task outlined in Reference (a).

(3) There is no cost to the customer in connection with this authorization.

CJD/It

Log No. 1506

*John Sutton*  
F. S. Chambers  
Manager of Contracts

W. E. Fitzsimons

6-122B

REAL/VARIG MINUTESModel 30-8  
No. 56

18 July 1962

Reference: (a) Sales Order 600-8-71 dated 18 July 1962

UNMODIFIED MODEL 30-8 CERTIFICATION - REVISION OF

Authorization has been received as evidenced by Reference (a) to proceed with changes of the unmodified Model 30-8 certification covering (a) optimization of VR speeds for airports at Bogota and Mexico City and (b) second segment climb improvement by use of increased thrust available with resetting throttles. Final data approved by FAA is to be available by August 6, 1962. The take-off speeds derived should be based upon the following assumed conditions:

<u>Airport</u>	<u>Bogota</u>	<u>Mexico City</u>
Temperature *(°F)	59	76
Altitude (Ft.)	8,355	7,340
Runway Length (Ft.)	12,470	11,035
Clearway	No	Yes (unlimited)
Slope	None	None

ACTION: These Minutes authorize Engineering Flight Test and all others concerned to take such action as is necessary to incorporate changes as described above.

\* Certified for a range covering these temperatures.



A. J. Savard  
Model 990 Project Engineer

GENERAL DYNAMICS/CONVAIR

Accounting Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aeroavias

Date: 25 June 1962

Reference: (a) Amendment No. 6 to Purchase  
Agreement between General Dynamics/  
Convair and REAL dated 29 December 1960  
((Subparagraph (2) Article (3)) Dollar  
amount set apart for initial spares  
procurement

SO No: 600-8-70

(b) Letter, John S. Russell to Dynalectron  
Corporation (Attention: John Schelling, Esq.),  
dated 14 June 1962  
(c) 5 June 1962 Memo, C. C. Sawyer to  
E. L. McDonald, referring to Reference (a)  
above

WO No: 31,000 Series

---

REAL/VARIG TRANSFER OF FUNDS, PRESENTLY HELD BY  
GENERAL DYNAMICS/CONVAIR, TO AIR CARRIER SERVICE CORPORATION, DIVISION  
OF DYNALECTRON CORPORATION

---

(1) In accordance with authorizations contained in Reference (b) above,  
General Dynamics/Convair Accounting Department is instructed to  
prepare a check in the amount of \$71,636.09, payable to Air Carrier  
Service Corporation, Division of Dynalectron Corporation, and  
deliver same to Commercial Contracts for transmittal to Air Carrier.

*hdc*  
GDC:hs

Log No. 1341

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

Revised: 21 May 1962

- (f) Telephone instructions from GD/New York, 18 May 1962
- (g) Confirming memo, E.L. McDonald from C.Z. German, dated 17 May 1962
- (h) Letter, 11-0-1530, to ACSC dated 18 May 1962

A decorative border consisting of two rows of vertical hatching lines, creating a grid-like pattern. The lines are thin and black, set against a white background.

Systems to be built by General Dynamics/Convair under contract to the U.S. Air Force Systems Corp., 1511 3 Street, N.W., Washington 3, D.C. and Canadian General Electric Co., 2642 Ste-Croix Ave., Montreal, Quebec and manufactured by General Dynamics, Montreal, Quebec.

(6) In accordance with References (f) and (g) above, cancel Paragraphs ( ) above and return General Dynamics/Convair Check No. 21449, in the amount of \$51,169.43 to GD/Convair Accounting for cancellation.

107  
revised to add References (f), (g) & (h), and to add Paragraph (6), and to cancel Paragraphs (3) & (4).

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 14 March 1962

SO No: 600-8-67

Reference: (a) REAL Letter, FR 025/62,  
dated 14 March 1962  
(b) CCP No. 59  
(c) MCL 62,036

WO No: 31,000 Series

CONVAIR 990 - REAL  
FLIGHT ENGINEER'S SEAT VENDOR, CHANGE TO

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Flight Engineer's Seat Vendor, Change to), based upon MCL 62,036, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*fil*  
GDC:hs

Log No. 642

*R. S. Chambers*  
R. S. Chambers  
Manager of Contracts

H. Brown  
6-1228

REAL/VARIG MINUTES

21 March 1962

Model 30-8  
No. 54

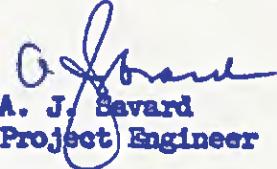
Reference: (a) Sales Order 600-8-67 dated 14 March 1962  
(b) CCP No. 59  
(c) MCL 62,036

FLIGHT ENGINEER'S SEAT VENDOR, CHANGE TO

REAL has accepted Convair's proposal, reference (b), Specification Administrative Change (Flight Engineer's Seat Vendor Change to), based upon MCL 62,036, reference (c).

This change has no effect on aircraft weight empty, performance or delivery schedule

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 28 February 1962

SO No: 600-8-66

Reference: (a) REAL Letter, FR 020/62,  
dated 28 February 1962  
(b) CCP No. 58  
(c) MCL 62,035

WO No: 31,000 Series

---

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.19.2.7.1

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.19.2.7.1), based upon MCL 62,035, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*file*  
GDC:hs

Log No. 565

*R. S. Chambers*  
F. S. Chambers  
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

REAL/VARIG MINUTES

6 March 1962

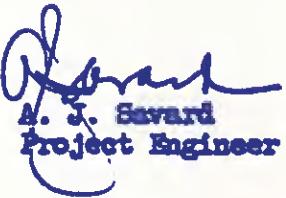
No. 51  
Model 30-8

Reference: (a) Sales Order 600-8-66 dated 28 February 1962  
(b) CCP No. 58  
(c) MCL 62,035

REVISION TO PARAGRAPH 3.19.2.7.1

REAL/VARIG has accepted Convair's proposal, reference (b), Specification Administrative Change (Revision to Paragraph 3.19.2.7.1), based upon MCL 62,035, reference (c). This change has no effect on aircraft weight empty, performance or delivery schedule.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.



A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

## Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 28 February 1962

SO No: 600-8-65

Reference: (a) REAL Letter, FR 017/62,  
dated 22 February 1962  
(b) CCP No. 57  
(c) MCL 62,034

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.12.11.2

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.12.11.2), based upon MCL 62,034, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

GDC:HS

Log No. 564

11, F. S. Chambers

GENERAL DYNAMICS/CONVAIR

REAL/VARIG MINUTES

6 March 1962

No. 52  
Model 30-8

Reference: (a) Sales Order 600-8-65 dated 28 February 1962  
(b) CCP No. 57  
(c) MCL 62,034

REVISION TO PARAGRAPH 3.12.11.2

REAL/VARIG has accepted Convair's proposal, reference (b), Specification Administrative Change (Revision to Paragraph 3.12.11.2), based upon MCL 62,034, reference (c).

This change has no effect on aircraft weight empty, performance or delivery schedule.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

*[Signature]*  
6-1228

REAL/VARIO MINUTES

19 March 1962

Model 30-8  
No. 53

Reference: (a) Sales Order 600-8-64 dated 26 February 1962  
(b) CCP N. 55  
(c) MCL 62,033

REVISION TO PARAGRAPH 3.16.11.3

REAL has accepted Convair's proposal, reference (b), Specification Administrative Change (Revision to paragraph 3.16.11.3), based upon MCL 62,033, reference (c).

This change has no effect on aircraft weight empty, performance or delivery schedule.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

*[Signature]*  
A. J. Savard  
Project Engineer

AJS:JCS:gt

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 26 February 1962

SO No: 600-8-64

Reference: (a) REAL Letter, FR 014/62,  
dated 22 February 1962  
(b) CCP No. 55  
(c) MCL 62,033

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.16.11.3

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.16.11.3), based upon MCL 62,033, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*hil*

GDC:hs

Log No. 542

*J. F. S. Chambers*  
J. F. S. Chambers  
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

## Sales Order

Sold to: REAL S/A - Transportes Aéreos  
and Empresa de Transportes Aerovias  
Brasil S/A  
S.A. Expressa De Viação Aérea Rio  
Grandense - VARIG

\*Revised: 5 March 1962  
Date: 19 February 1962  
Rev. No.: 80 No: 600-8-63  
WO No: 31,000 Series

Reference: (a) Work Order No. 27111

**STORAGE, MODEL 30-8 AIRCRAFT**

\* (1)a. This Sales Order authorizes all concerned to prepare Production No. 30-10-13 for storage for a maximum of 90 days, commencing 19 February 1962.

(2) All costs in connection with this storage are to accumulate under Work Order No. 31717.

\* (1)b. Prepare Production No. 30-10-19 for storage for a maximum of 90 days, commencing 12 March 1962.

(2) Prepare Production No. 30-10-20 for storage for a maximum of 90 days, commencing 23 March 1962.

EDC: Inc.

Log No. 105-641

\*Rev. to change Ref.(a), Paras. (1)a., and (2);  
to add (1)b.

F. S. ~~Robert~~  
Name or Contract

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 2 February 1962

SO No: 600-8-62

Reference: (a) REAL Letter, FR 006/61,  
dated 29 January 1962  
(b) CCP No. 54  
(c) MCL 62,032

WO No: 31,000 Series

CONVAIR 990 - REAL  
INSTALLATION OF HIGH SPEED TIRES

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Installation of High Speed Tires), based upon MCL 62,032, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*hsl*  
GDC:hs

Log No 447

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

REAL/VARIO MINUTES

6 March 1962

No. 50

Model 30-8

Reference: (a) Sales Order 600-8-62 dated 2 February 1962  
(b) CCP No. 54  
(c) MCL 62,032  
(d) Memo, Sproat to Trussell dated 13 November 1961

INSTALLATION OF HIGH SPEED TIRES

REAL has accepted Convair's proposal, reference (b), Specification Administrative Change (Installation of High Speed Tires), based upon MCL 62,032, reference (c). This change has no effect on aircraft weight empty, performance or delivery schedule.

**ACTION:** Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

Design Group action previously authorized by reference (d).



A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A

Date: 18 January 1962

SO No: 600-8-61

Reference: (a) REAL Letter, FR 001/62,  
dated 16 January 1962  
(b) CCP No. 42  
(c) MCL 62,028

WO No: 31,000 Series

CONVAIR 990 - REAL/VARIG  
REVISION TO ENGINE AND THRUST REVERSER SPECIFICATIONS

- (1) REAL/VARIG has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Engine and Thrust Reverser Specifications), based upon MCL 62,028, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*fil*  
GDC:hs

Log No 265

*J. F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

~~Brown~~

6142

REAL MINUTESNo. 49  
Model 30-8

2 February 1962

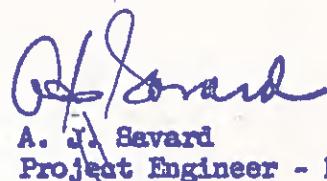
Reference: (a) Sales Order 600-8-61 dated 18 January 1962  
(b) CCP No. 42  
(c) MCL 62,028

REVISION TO ENGINE AND THRUST REVERSER  
SPECIFICATIONS

REAL/VARIG has accepted Convair's proposal, reference (b), Specification Administrative Change (Revision to Engine and Thrust Reverser Specifications), based upon reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in reference (c).

This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

ACTION: Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.

  
A. J. Sevard  
Project Engineer - Model 30

AJS:JCS:gt

Customer: VARIG S/A - Transportes Aéreos  
e Serviços de Transportes Aéreos  
Brazil S/A

Received: 15 February 1962  
Date: 15 February 1962  
SO No: 600-01-60

Reference: (a) Memo, R.A. Meale to  
F. S. Chambers/B.J. Simms,  
dated 15 January 1962  
(b) MCL 62,127 (CCP No. 96)

WC No: 31,000 Series

**INSTALLATION OF GROUND AIR CONDITIONING CONNECTORS NO. 30-28023  
MODEL 30-8 AIRCRAFT**

(1) In accordance with Reference (a) this Sales Order authorizes installation of ground air conditioning connectors No. 30-28023 on all VARIG 990's prior to delivery.

GL-106

File No. 492  
\*Rev. to add Ref. (b).

*R. S. Chambers*  
R. S. Chambers  
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

*Matherow*

6140

REAL/VARIG MINUTES

15 January 1962

No. 48  
Model 30-8

Reference: (a) R. A. Noale memo to Chambers/Simons dated  
15 January 1962  
(b) Sales Order #600-8-60 dated 15 January 1962

INSTALLATION OF AIR CONDITIONING GROUND CONNECTION

MODEL 30-8 AIRCRAFT - PRODUCTION NUMBERS 13, 19 & 20

These minutes authorize all concerned to proceed with such action as necessary to install ground air conditioning connection #30-28023 on all VARIG 990's prior to delivery.

ACTION: An EWO shall be prepared and processed as soon as possible. Design Group shall coordinate with CCB to establish a satisfactory off-board date. Engineering Specification section will forward necessary revised specification pages to the Contracts Department as soon as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer

RECEIVED

JAN 16 '62

DATA &  
PROCEDURES  
ADMIN.

GENERAL DYNAMICS/CONVAIR

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A  
Sao Paulo, Brazil

6140  
Accounting Sales Order

Date: 28 November 1961  
SO No: 600-8-59  
WO No: 31,000 Series

CONVAIR 990 - REAL

CHANGE ORDER NO. 8

(1) Attached is a copy of Change Order No. 8 signed by REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A, which amends Detail Specification Report No. ZD-30-008, dated 2 May 1960, to incorporate Commercial Change Proposal No. 43.

RECEIVED

DEC 7 '61

DATA &  
PROCEDURES  
ADMIN.

*h/f*  
GDC:hs

Log No. 3205

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

cc: (all with attachment)  
Arthur Anderson & Co.  
G. H. Blain  
D. C. Burrows  
F. S. Chambers  
G. A. Dies, Jr.  
J. D. Eiland  
R. D. Evans  
O. W. Harper (v/attach-2)  
A. L. Hendricks  
R. R. Hoover (v/attach-2)  
W. J. Jason

H. A. Kayes  
W. T. Lake  
V. S. Mathews (v/attach-2)  
C. L. Meador  
R. C. Neal (exec. copy)  
A. G. Rothlisberg  
C. C. Sawyer  
I. D. Sykes  
R. B. Watts  
File: C.O. #8  
Sales Order File

CHANGE ORDER NO. 8

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957

by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias  
Brazil S/A and General Dynamics/Convair

---

I. The Detail Specification Report ZD-30-008 is hereby  
amended to reflect certain changes all as more particularly  
described below.

II. Aircraft affected:

Undelivered - 3

III. Effect on weight and balance:

Effect on Guaranteed Weight Empty	+78.0 pounds
Effect on Operating Weight Empty	+78.0 pounds
Effect on Balance	+69,960 inch-pounds

IV. Effect on performance:

None

V. Effect on delivery:

None

VI. This Change Order results in the following charges or  
credits --

None

VII. The attached Commercial Change Proposal Summary No. 4  
and revised Specification Pages dated 25 July 1961 are  
hereby incorporated into and becomes a part of Detail  
Specification Report No. ZD-30-008 dated 2 May 1960.

CHANGE ORDER NO. 8

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
and General Dynamics/Convair

---

VIII. Except as herein modified all provisions of the Purchase Agreement and the Detail Specification shall remain in effect.

GENERAL DYNAMICS CORPORATION

By: /s/ F. S. Chambers

Title: Manager of Contracts

Accepted and Agreed to

This 13 day of November 1961

REAL S/A - TRANSPORTES AEREOS

By: /s/ R. Bordini

Title: President

EMPRESA DE TRANSPORTES AEROVIAS BRAZIL S/A

By: /s/ R. Bordini

Title: Director Superintendent

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 8 November 1961

SO No: 600-8-58

Reference: (a) Memo, Savard to Chambers,  
dated 2 November 1961  
(b) REAL Letter, Robattino to  
Clark, dated 8 November 1961

WO No: 31,000 Series

FREQUENCIES FOR HF STANDBY RECEIVER - MODEL 30-8 AIRCRAFT

(1) REAL has submitted the following list of frequencies to be installed on the HF Standby Receiver for their 990 Model 30-8 aircraft:

HF CHANNELS AR-72		
2182	5641.5	8939
2889	5649	8947.5
2910	5656.5	8961.5
2931	5680	9452
2966	5920	9720
2973	5935	9810
2987	6537	9855
3081	6544.5	10000
3023.5	6552	10021
3404.5	6567	10048
3418.5	6597	10093.5
3432.5	6612	11290
3453.5	6664.5	13264.5
3467.5	6685	
4637.5	6872	13314.5
4950	8085	13344.5
5000	8364	13354.5
5484	8820	15036
5499	8828.5	17916.5
5536.5	8837	17926.5
5559	8845.5	17936.5
5566.5	8871	17946.5
5581.5	8879.5	18023.5
5611.5	8888	20000
		21870

(2) All departments concerned are authorized to take such action as is necessary to procure the above mentioned crystals. This is in accordance with Detail Specification ZD-30-008.

GDC:hs

Log No. 2077

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

Revised: 30 January 1962

Date: 3 November 1961

\*Revised: 10 November 1961

\*\*Revised: 29 December 1961

Sold to: REAL S/A - Transportes Aereos      \*Revised: 8 January 1962  
 and Empresa de Transportes Aerovias      \*\*Revised: 15 January 1962  
 Brazil S/A

Reference: (a) Sales Order 600-8-50      S.O. No: 600-8-57  
 (Paragraph 6)      W. O. No: 31,000 Series  
 (b) MCL 62,125 dated 10/31/61.  
 (c) Memo, Sproat to Clark, dated 1/4/62.  
 (d) Telecon, Sproat/Clark, 15 January 1962.  
 (e) Letter, Charlotte Franklin from  
 P.S. Chambers dated 8 September 1961, (10-0-4255).

DELETION OF CUSTOMER VENDED EQUIPMENT IN THE  
 MODEL 30-8 AIRCRAFT, PRODUCTION NOS. 13, 19 and 20

- (1) You are hereby authorized to take such action as is necessary to delete the customer furnished SELL galleys from subject aircraft and to certify and deliver subject aircraft without the galleys.
- (2) Engineering Specification Section will forward necessary revised Specification Pages to the Contracts Department as soon as practicable.
- (3) There shall be no effect on aircraft delivery schedule.
- (4) All concerned are hereby authorized to place the following listed items aboard the subject aircraft as loose equipment at time of delivery of each aircraft:

30-92721-1	Buffet installation - No. 1 Ship all parts required	(except buffet)
30-92722-1	Buffet installation - No. 2 Ship all parts required	(except buffet)
30-94733-1	Buffet installation - No. 3 Ship all parts required	(except buffet)
30-94734-1	Buffet installation - No. 4 Ship all parts required	(except buffet)
30-94735-1	Buffet installation - No. 5 Ship all parts required	(except buffet)

(Continued on Page Two)

GDC:hs

Log No. 3019 11/15 121 180 708 -- 635

/gdc/ \*Revised to add Ref. (b).      \*\*Rev. to add Para. (4)

\* \*Rev. to delete 1 item and add 2 items under  
Para. (4) and add Ref. (c).

\*\*Rev. to add Ref. (d), and to change Para. (4).

\*\*\*Rev. to add Ref. (e) and add an item under Para. (4).

\*\*Revised to add to loose equipment list.

/s/ P.S. Chambers

P. S. Chambers

Manager of Contracts

Sold to: EMBRAER S/A - Transportes Aéreos  
and Empresa de Transportes Aerovias  
Brazil, S/A

Revised: 30 January 1962  
Date: 3 November 1961  
S.O. No: 600-8-57  
W.O. No: 31,000 Series

Form. (4) Cont'd.

1000  
1000

GENERAL DYNAMICS/CONVAIR

*Matthew*  
6140

REAL/VARIG MINUTES

No. 45

8 November 1961

Model 30-8

Reference: (a) Sales Order 600-8-57 dated 3 November 1961

DELETION OF CUSTOMER FURNISHED EQUIPMENT IN THE  
MODEL 30-8 AIRCRAFT, PRODUCTION NOS. 13, 19 AND 20

These Minutes authorize all concerned to proceed with such action as is necessary to delete the customer furnished SELL galley from subject aircraft and to certify and deliver subject aircraft without the galley.

There shall be no effect on aircraft delivery schedule.

ACTION: An EMO shall be prepared and processed as soon as possible. Design Group shall coordinate with CCB to establish a satisfactory off-board date. Engineering Specification Section will forward necessary revised Specification Pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

RECEIVED

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NOV 13 '61

DATA &  
PROCEDURES  
ADMIN.

REAL/VARIG MINUTES

10 November 1961

No. 46

Model 30-8

Reference: (a) Sales Order 600-8-58 dated 8 November 1961

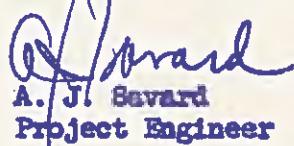
FREQUENCIES FOR HF STANDBY RECEIVER

- REAL has submitted the following list of frequencies to be installed on the HF Standby Receiver for their 990 Model 30-8 aircraft:

2182	5641.5	8939
2889	5649	8947.5
2910	5656.5	8961.5
2931	5680	9452
2966	5920	9720
2973	5935	9810
2987	6537	9855
3081	6544.5	10000
3023.5	6552	10021
3404.5	6567	10048
3418.5	6597	10093.5
3432.5	6612	11290
3453.5	6664.5	13264.5
3467.5	6685	13314.5
4637.5	6872	13344.5
4950	8085	13354.5
5000	8364	15036
5484	8820	17916.5
5499	8828.5	17926.5
5536.5	8837	17936.5
5559	8845.5	17946.5
5566.5	8871	18023.5
5581.5	8879.5	20000
5611.5	8888	21870

- All departments concerned are authorized to take such action as is necessary to procure the above mentioned crystals. This is in accordance with Detail Specification ZD-30-008.

ACTION: The Design Group shall prepare a conversion chart showing crystal frequencies corresponding to the above listed operating frequencies.

  
A. J. Sevard  
Project Engineer

*11077*  
GENERAL DYNAMICS/CONVAIR

*6142*  
Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 24 October 1961  
SO No: 600-8-56

Reference: (a) Request from SELL, manufacturers  
of CFE galleys for REAL 30-8 aircraft,  
Nos. 13, 19 and 20, through Luiz  
Robattino, 24 October 1961

WO No: 31,000 Series

REAL 30-8 CUSTOMER VENDED GALLEYS

- (1) This Sales Order authorizes the Material Department to forward pre-paid to REAL's buffet manufacturer in Germany three (3) each, connector plugs, No. 92-40325-116 (Vendor No. PT06E-18-30P).
- (2) Shipping instructions shall bear the following:

VIA Air Fastest

SELL  
Frankfurt Rhein-Main Airport  
Attention: Messrs. Lassen & Co.  
Frankfurt (Main)  
Airport  
Germany

- (3) The consignment covering the aforementioned goods shall be accompanied by a proforma invoice stating that the items are being sent to SELL as samples free of charge. Value for customs purposes to be established by Material Department.

GDC:hs  
*ml*

Log No. 2985

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

\*\*\*Revised: 22 November 1961

\*\*\*Revised: 8 November 1961

1. (a) Letter to S.A.C., dated  
11 November, 1961, dated  
October 1961.

(c) REAL letter, PR 199/61, dated  
11/6/61, and accompanying  
drawings.

(d) REAL letter, PR 216,  
dated 11/14/61.

1. In accordance with S.A.C. request, Reference (a), nameplate  
specifications to be changed as follows:

1. Replace the word "Coronado" on the "fuselage and tail" line  
vertical stabilizer (Ref. VARIG drawing 31-00-1, copy 1 of 1).
2. Replace the name of the first 3 of 990, located on the nose, with  
the color instead of black (Ref. VARIG drawing 31-00-1, copy 1 of 1).

(6) Install registration  
letters on lower surfaces  
of both wings on  
REAL/VARIG aircraft,  
Production Nos. 13, 19 &  
20, in accordance  
with Convair Sketch  
#SK 30-11151-1. *if*

- 4) Replace the word "Coronado" on both sides of the fuselage and both sides  
of top of the vertical stabilizer with the following -- "Convair 990" --  
on Production Nos. 13, 19 and 20. Letters and numerals on stabilizer to  
be 5 inches high, letters and numerals on fuselage to be 6 inches high  
in accordance with referenced drawings.
- 5) Remove the markings "Convair 990" on all 4 pods on aircraft Production  
Nos. 19 and 20 only.

----- 3167 -----

----- placed to add subpara. (4) & (5) Under Para. (3).

\*\*\*Revised to add Ref. (d) and Subpara. (6).

*Matthews*  
6140

REAL/VARIO MINUTES

16 October 1961  
Revised 9 November 1961  
Revised 22 November 1961

No. 43  
Model 30-8

Reference: (a) Sales Order 600-8-55 dated 13 October 1961,  
Revised, 8 November 1961 - revised  
22 November 1961

REAL 30-8 EXTERIOR MARKINGS AND PAINT

These minutes authorize all concerned to proceed with the exterior markings in accordance with VARIO Drawing No. 31-00-1 (5 sheets), #1 & #4 revised also color chips as identified below, on the three (3) REAL model 30-8 aircraft:

LAC 575A	Green
LAC 758A	Gray
LAC 756A	Yellow
LAC 703A	White
LAC 747A	Black
LAC 755A	Blue

There is no effect on aircraft performance or delivery schedule.  
Effect on aircraft weight empty to be determined.

**ACTION:** An ENO shall be prepared and processed as soon as possible. Design Group shall coordinate with CCB to establish a satisfactory offboard date.

Replace the word "Coronado" on the fuselage and vertical stabilizer with "Convair 990" in accordance with revision to sheet #1 of VARIO Drawing 31-00-1. Do not install "990" on pods for production aircraft No's 19 and 20.

Install registration letters on lower surfaces of both wings on all production a/c Nos. 13, 19 & 20 in accordance with Convair sketch SK 30-11151-1.

*G. J. Savard*  
A. J. Savard  
Project Engineer

*G. J. Savard*  
RECEIVED

NOV 24 '61

DATA  
PROCEDURES  
ADMIN.

*H. Brown*  
6142

REAL/VARIG MINUTES

No. 44  
Model. 30-8

19 October 1961

Reference: (a) Sales Order 600-8-54 dated 29 September 1961  
(b) MCL 62,122

CHANGES TO REAL 30-8 INTERIOR TRIM AND COLOR

REAL/VARIG has accepted Convair's proposal based upon MCL 62, 122, reference (b). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in reference (b).

Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

DESCRIPTION OF CHANGE:

- 1) Replace Lime Naugahyde bonded to Ensolite handrail trim with Spanish Gold Naugahyde bonded to Ensolite.
- 2) Replace Rose Metallic Naugahyde arm-rest caps with Spanish Gold Naugahyde on all passenger seats.

ACTION: EWO shall be prepared and processed as soon as possible utilizing the off-board dates as specified on Action Record as revised 10-6-61.

*A. J. Savard*  
A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

H. Mathews

6140

REAL/VARIG MINUTES

16 October 1961

No. 43  
Model 30-8

Reference: (a) Sales Order 600-8-55 dated 13 October 1961

RECEIVED

OCT 17 '61

REAL 30-8 EXTERIOR MARKINGS AND PAINT

SPECIFICATIONS &  
OFFICE SERVICES

These minutes authorize all concerned to proceed with the exterior markings in accordance with VARIG Drawing No. 31-00-1 (5 sheets), also color chips as identified below, on the three (3) REAL model 30-8 aircraft:

LAC 575A	Green
LAC 758A	Gray
LAC 756A	Yellow
LAC 703A	White
LAC 747A	Black
LAC 755A	Blue

There is no effect on aircraft performance or delivery schedule.  
Effect on aircraft weight empty to be determined.

ACTION: An EWO shall be prepared and processed as soon as possible. Design Group shall coordinate with CCB to establish a satisfactory offboard date.

*A. J. Savard*  
A. J. Savard  
Project Engineer

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 29 September 1961

SO No: 600-8-54

Reference: (a) MCL 62,122  
(b) VARIG Letter, Charlotte Franklin  
to R. L. Wintlinger, dated  
26 September 1961

WO No: 31,000 Series

CHANGES TO REAL 30-8 INTERIOR TRIM AND COLOR

- (1) Per Reference (b) REAL/VARIG has accepted Convair's proposal based upon MCL 62,122, Reference (a). Accordingly all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (a).
- (2) Engineering Specification Section will forward necessary revised Specification Pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

RJW:md

Log No. 2841

*F. S. Chambers*  
F. S. Chambers  
Manager of Contracts

*Matthews*

6140

REAL/VARIG MINUTES

No. 44  
Model 30-8

19 October 1961

Reference: (a) Sales Order 600-8-54 dated 29 September 1961  
(b) MCL 62,122

CHANGES TO REAL 30-8 INTERIOR TRIM AND COLOR

REAL/VARIG has accepted Convair's proposal based upon MCL 62, 122, reference (b). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in reference (b).

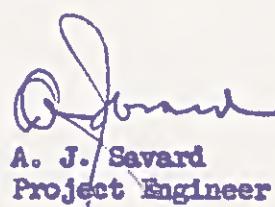
Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

## DESCRIPTION OF CHANGE:

- 1) Replace Lime Naugahyde bonded to Ensolite handrail trim with Spanish Gold Naugahyde bonded to Ensolite.
- 2) Replace Rose Metallic Naugahyde arm-rest caps with Spanish Gold Naugahyde on all passenger seats.

ACTION: EWO shall be prepared and processed as soon as possible utilizing the off-board dates as specified on Action Record as revised 10-6-61.

  
A. J. Savard  
Project Engineer

RECEIVED

OCT 23 '61

SPECIFICATIONS &  
OFFICE SERVICES

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil S/A

\*Revised: 28 September 1961  
Date: 21 September 1961  
SO No: 600-8-53

Reference: (a) MCL 62,116, revised  
24 July 1961  
(b) Cable, Robattiao  
from Bordini, dated  
21 September 1961  
(c) Real Letter, MAN-289/61,  
dated 15 September 1961

CCP #52  
WO No: 31,000 Series

CONVAIR 990 - REAL BUFFET

- (1) REAL has accepted Convair's proposal, based upon MCL 62,116, Reference (a). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (a).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Weight effectiveness will be furnished at a later date by revision to this Sales Order. There is no effect on aircraft performance or delivery schedule.

*No Spec Action*

RLW:hs

Log No. 2837

*Revised to add Reference (c).*

*P. S. Chambers*  
Manager of Contracts

*Matthews*  
6140  
*Brown*

REAL MINUTES

3 October 1961

No. 42  
Model 30-8

Reference: (a) Sales Order 600-8-53 revised 28 September 1961  
(b) MCL 62,116

## CONVAIR 990 REAL/VARIG AIRLINES

BUFFETS - CHANGE IN VENDOR AND ELECTRICAL POWER

REAL Airlines has accepted, as evidenced by reference (a), Convair's proposal based upon MCL 62,116, reference (b).

## DESCRIPTION OF CHANGE:

- a. Engineering to provide coordination with new buffet vendor (Sell-Haus Und Kuchentechnik).  
Note: Assume no change in number or design of buffet installation.
- b. Revise electrical power distribution to increase the existing power supply of buffet #3 to 11 kw in lieu of 5 kw.
- c. Relocate the auxiliary buffet (#5) oxygen bottle (1) to right hand coat closet utilizing existing coat closet provisions.

This change is effective on aircraft #30-8-1 and on.

ACTION: An EWO shall be prepared and processed as soon as possible. In as much as the offboard dates, as specified on Action Record dated 8-8-61, have already passed, a design group shall coordinate with CCB to establish a satisfactory offboard date.

RECEIVED

OCT 5 '61

SPECIFICATIONS &  
OFFICE SERVICES

AJS:JCS:gt

*A. J. Sevard*  
A. J. Sevard  
Project Engineer

Sold to: REAL S/A - Transportes Aéreos  
and Empresa de Transportes  
Brazil S/A

Revised: 14 November 1961  
Date: 7 September 1961  
SO No: 600-S-5

Reference: (a) REAL Letter, Luiz Robattino to  
R. L. Wintringer, dated 25 August 1961  
(b) REAL Letter, Robattino to Clark,  
dated 13 November 1961.

WO No: 31,000 Series

REAL 30-6 CRYSTALS TO MAINTAIN HF COMMUNICATION SYSTEM

(1) In accordance with Convair request, REAL has submitted the following frequencies for Collins 618-S-1 HF communications to be incorporated in their three (3) 990 aircraft:

BAND - 1

A-3	2182	1932	A-3
A-6	2868	2618	A-6
A-12	2875	2625	A-12
A-16	2889	2639	A-16
A-20	2910	2660	A-20
A-23	2931	2681	A-23
B-1	2952	2702	B-1
B-4	2966	2716	B-4
B-8	2973	2723	B-8
B-16	2987	2737	B-16
B-18	3081	2831	B-18
B-20	3023.5	2773.5	B-20
D-10	3404.5	3154.5	D-10
D-15	3411.5	3161.5	D-15
D-16	3418.5	3168.5	D-16
D-20	3432.5	3182.5	D-20
D-22	3446.5	3196.5	D-22
D-23	3453.5	3203.5	D-23
D-24	3467.5	3217.5	D-24

BAND - 2

G-1	4220	1985	A-1
G-8	4637.5	2193.75	A-8
G-15	4950	2350	A-15
H-21	5000	2375	B-21
I-1	5105	2427.5	C-1
I-13	5484	2617	C-13
I-16	5506.5	2628.25	C-16
I-17	5499	2624.5	C-17
I-18	5521.5	2635.75	C-18
I-19	5536.5	2643.25	C-19
I-20	5559	2654.5	C-20
I-21	5566.5	2658.25	C-21
J-5	5581.5	2665.75	D-5
J-6	5604	2677	D-6
J-9	5611.5	2680.75	D-9
J-11	5619	2684.5	D-11

GENERAL ELECTRIC/CONVAIR

Sold to: NEAI S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Sales Order

\*Revised: 14 November 1961  
Date: 7 September 1961

SO No: 600-8-52

Reference: (a) (See Page 1)

WO No: 31,000 Series

(BAND - 2 cont'd)

64444444	64444444	64444444	64444444
J-12	5641.5	2695.75	D-12
J-13	5649	2699.5	D-13
J-14	5656.5	2703.25	D-14
J-19	5671.5	2710.75	D-19
J-21	5680	2715	D-21
K-2	5927	2838.5	E-2
K-3	5935	2842.5	E-3
K-5	6537	3143.5	E-5
K-7	6544.5	3147.25	E-7
K-8	6552	3151	E-8
K-9	6567	3158.5	E-9
K-10	6582	3166	E-10
K-21	6597	3173.5	E-21
L-5	6612	3181	F-5
L-8	6627	3188.5	F-8
L-9	6654.5	3207.25	F-9
L-11	6685	3217.5	F-11
L-16	6872	3311	F-16

BAND - 3

M-2	8085	1958.75	A-2
M-4	8364	2028.5	A-4
M-10	8820	2142.5	A-10
M-11	8828.5	2144.625	A-11
M-14	8837	2146.75	A-14
M-22	8845.5	2148.875	A-22
M-24	8854	2151	A-24
N-5	8862.5	2153.125	B-5
N-6	8871	2155.25	B-6
N-10	8879.5	2157.375	B-10
N-14	8888	2159.5	B-14
N-22	8913.5	2165.875	B-22
N-23	8930.5	2170.125	B-23
P-2	8939	2172.25	C-2
P-3	8947.5	2174.375	C-3
P-4	8961.5	2177.875	C-4
P-5	9452	2300.5	C-5
P-6	9720	2367.5	C-6
P-8	9810	2390	C-8
P-9	9855	2401.25	C-9
P-10	10000	2437.5	C-10
P-12	10021	2442.75	C-12
P-15	10048	2449.5	C-15
P-22	10093.5	2460.875	C-22
R-3	11299.5	2762.375	D-3
R-7	11299	2760	D-7
R-8	11395	2763.75	D-8

Ministry of  
Transport  
Ministry of  
Transport  
Brazil S/A

Order  
#Revised: 1<sup>st</sup> November 1961  
Date: 1<sup>st</sup> November 1961  
S.O. No: 600-5-12

Reference: (a) (See Page 1)

WC No: 31,000 Series

(Band = 3 cont'd)

S-16	13264.5	3253.625	E-16
S-19	13274.5	3256.125	E-19
S-20	13294.5	3261.125	E-20
S-22	13304.5	3263.625	E-22
S-6	13314.5	3266.125	F-6
S-7	13324.5	3268.625	F-7
T-13	13334.5	3271.125	F-13
T-14	13344.5	3273.625	F-14
T-20	13354.5	3276.125	F-20

BAND = 4

U-9	15036	1845.75	A-9
V-2	17906.5	2207.0625	B-2
V-3	17916.5	2208.3125	B-3
V-7	17926.5	2209.5625	B-7
V-11	17936.5	2210.8125	B-11
V-19	17946.5	2212.0625	B-19
V-24	18023.5	2221.6875	B-24
W-11	20000	2468.75	C-11
W-23	21879	2702.5	C-23

(2) Purchasing Department is authorized to procure necessary crystals to maintain the HF communications system as set out in the above frequencies, this being in compliance with Detail Specification ZD-30-008.

ba

1. Assigned to SIC Rep. (U) and to cancel crystal frequency  
2205.5 per channel 3-11.

*J. F. S. Chambers*  
Manager of Contracts

GENERAL DYNAMICS/CONVAIR

*Matthew*  
6140

VARIG MINUTES

24 November 1961

No. 47  
Model 30-8

Reference: (a) Sales Order 600-8-52, revised 11-14-61

REAL 30-8 CRYSTALS TO MAINTAIN HF COMMUNICATION SYSTEM

As evidenced by Reference (a), REAL/VARIG has submitted a list of frequencies required for their HF communications and the corresponding channel allocations.

ACTION: Engineering is hereby authorized to proceed with the incorporation of this information as applicable to ABM's and Engineering Releases.

*A. J. Savard*  
A. J. Savard  
Project Engineer

RECEIVED

NOV 27 '61

DATA &  
PROCEDURES  
ADMIN.

GENERAL DYNAMICS/CONVAIR

Accounting Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A  
Sao Paulo, Brazil

Date: 6 September 1961  
SO No: 600-8-51  
WO No: 31,000 Series

CONVAIR 990 - REAL

CHANGE ORDER NO. 7

(1) Attached is a copy of Change Order No. 7 signed by REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A, which amends Detail Specification Report No. ZD-30-008, dated 2 May 1960, to incorporate the Specification Change Nos. 23, 27, 28, 30, 32, 33, 34, 35, 37, 38, and 39, set out in Paragraph VI of said Change Order.

RLW:hs

Log No. 2694

*Received, and file*  
P. S. Chambers  
Manager of Contracts

cc: (all with attachment)

Arthur Anderson & Co.  
G. H. Blain  
D. C. Burrows  
Corporate Records  
G. A. Dies, Jr.  
D. H. Digges  
J. D. Eiland  
R. D. Evans  
O. W. Harper (2)  
A. L. Hendricks  
R. R. Hoover (2)

W. J. Jason  
H. A. Kayes  
W. T. Lake  
V. S. Mathews (2)  
C. L. Meador  
A. G. Rothlisberg  
C. C. Sawyer  
I. D. Sykes  
R. K. Waldo (2)  
R. B. Watts  
J. G. Zevely  
File (2)

CHANGE ORDER NO. 7

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957

by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

I. The Detail Specification Report ZD-30-008 is hereby amended to reflect certain changes all as more particularly set forth in Specification Change Nos. 23, 27, 28, 30, 32, 33, 34, 35, 37, 38, and 39, Commercial Change Proposal Summary No. 3 and Specification Revision Pages dated 20 June 1961 attached hereto and made a part hereof.

II. Airplanes Affected:

Undelivered - 3

III. Effect on weight and balance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 3 attached.

IV. Effect on performance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 3 attached.

V. Effect on delivery:

None

VI. This Change Order results in the following charges and/or credits:

A. Change No. 23 -- Miscellaneous Revisions to Specification Language (Pages 55, 67, 69, 69 Con't, 99, A-13, and A-15)

No Charges or Credits

B. Change No. 27 -- Adjustable Head Rests, Deletion of (Page 91)

Total Non-recurring Charges	\$ 333
Recurring Credit per Aircraft	5,873

Total Credit for 3 Aircraft	\$ 17,286
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CHANGE ORDER NO. 7

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957

by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

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C. Change No. 28 -- Revision to Oxygen Cylinders (Pages 6 and A-16)	No Charges or Credits
D. Change No. 30 -- Deletion of Aft Engine Fan Anti-Icing System)(Page 111)	No Charges or Credits
E. Change No. 32 -- Revision to Leading Edge Device and Flap Operation Language (Pages 30 and 55a)	No Charges or Credits
F. Change No. 33 -- Revision to Paragraph 3.12.9.7.1, Appendix L-C and Emergency Exit Flow Illustration (Pages 20a, 40 and A-17)	No Charges or Credits
G. Change No. 34 -- Doppler Radar, Revision to Provisions for (Page 88)	No Charges or Credits
Total Non-recurring Charges	\$ 3,069
Recurring Charge per Aircraft	None
Total Charges for 3 Aircraft	\$ 3,069
H. Change No. 35 -- Rearrangement of Instruments and Revision to Pilots' Instrument Panel Illustration (Pages 34, 47, 47a, 48 and A-6)	No Charges or Credits
I. Change No. 37 -- Revision to Pilots' Pedestal Illustration (Page 47b)	No Charges or Credits
J. Change No. 38 -- Revision to Fire Control Panel and Warning Horn Diagram Illus- trations (Pages vi, 48d, and 73a)	No Charges or Credits
K. Change No. 39 -- Revision to Paragraph 3.16.8.2.3 (Page 67)	No Charges or Credits

CHANGE ORDER NO. 7

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957

by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

I. Summary of the foregoing charges and/or credits:

Total Non-recurring Charges	\$ 3,402
Total Recurring Credit	<u>17,619</u>
Total Credit for 3 Aircraft	\$ 14,217

VII. The attached Commercial Change Proposal Summary No. 3 and revised Specification Pages dated 20 June 1961 are hereby incorporated into and become a part of Detail Specification Report No. ZD-30-008 dated 2 May 1960.

VIII. Except as herein modified all provisions of the Purchase Agreement and the Detail Specification shall remain in effect.

GENERAL DYNAMICS/CONVAIR

By: /s/ F. S. Chambers

Title: Manager of Commercial Contract

Accepted and Agreed to as of  
this 11 day of August 1961.

REAL S/A - TRANSPORTES AEREOS

By: /s/ Eduardo M. Alvarenga

Title: Director

EMPRESA DE TRANSPORTES AEROVIAS BRASIL S/A

By: /s/ Eduardo M. Alvarenga

Title: Director

REAL INFORMATION  
Aeros and Futurama de  
Transportes Brasil S/A

Information:

- (a) MCL 67, 118 revised  
7 August 1961
- (b) REAL Letter, FR 164/61  
dated 18 August 1961
- (c) REAL letter, FR 167/61  
dated 23 August 1961
- (d) REAL Letter, FR 169/61,  
dated 23 August 1961
- (e) ~~MISS~~ 67/21/W
- (f) REAL Letter, MAR-283/61, dated 31 August 1961
- (g) Wire from Bordini dated 13/3/61; Memo from Sprock dated  
11/2/61.
- (h) Letter, ACSC, Read to Clark, dated 11/8/61
- (i) Letter, VARIG, Rio to SCLL, 11/27/61
- (j) Advice from C. B. Adams, Traffic Operations  
International, VARIG/REAL

- (k) ~~MISS~~ 67/21/W
- (l) AVO, Telleray to Barker, dated 3/30/62.

MODEL 30-8 REAL ADDITIONAL CUSTOMER VENDED EQUIPMENT

(1) Reference (b), (c), and (d) letters list certain items of equipment that are to be supplied by REAL for installation, by Convair, in each of their three (3) Model 30-8 aircraft. These items are not reflected in the REAL Detail Specification 71-30-108 or customer furnished, detail specification. Additionally, as reflected in Reference (g), the detail specification should not be revised to include this equipment as customer furnished, Convair installed.

General Department of CFE Section, is requested to immediately communicate to those orders concerning the following items that purchase orders are to reflect. Due-date need dates will not be increased at the prices indicated.

Specification

	Part Number	QTY	Unit	Value per
(a) Appendix, Marconi 623 Antenna Adapter Committee				
Antenna	314-820	1		
Indicator Unit	314-815	1		
Antenna	314-825	1		
Indicator	314-829	1		
Relay				
Indicator Unit G-1000 Knobs	316-702	1		
Antenna Adapter Plate				

Retyped 11 January 1961  
SALES ORDER

SALES ORDER  
REAL SIA Technologies  
Aerospace and Space Air  
Transportation Division

Date 31 August 1961

Sum 600.000

Reference. (See Page One)

WO No 11,000 Series

Document Revised: 13 March 1962  
Document Revised: 4 April 1962

(b) Edo Loran 34A

Part Number	Aircraft	Q	Unit
21742	1	1	1
25333	1	1	1
26681	1	1	1

(c) 470-75 passengers Liner 12.4.6

(d) Gables G565 Control Panel

(e) The purchase orders are to be directed to the following addresses and instructions for combining shipping and special instructions are set forth below.

ADDRESS:

4441/4442  
4441/4442/4443/4444/4445/4446/4447/4448/4449/44410/44411/44412/44413/44414/44415/44416/44417/44418/44419/44420/44421/44422/44423/44424/44425/44426/44427/44428/44429/44430/44431/44432/44433/44434/44435/44436/44437/44438/44439/44440/44441/44442/44443/44444/44445/44446/44447/44448/44449/444410/444411/444412/444413/444414/444415/444416/444417/444418/444419/444420/444421/444422/444423/444424/444425/444426/444427/444428/444429/444430/444431/444432/444433/444434/444435/444436/444437/444438/444439/444440/444441/444442/444443/444444/444445/444446/444447/444448/444449/4444410/4444411/4444412/4444413/4444414/4444415/4444416/4444417/4444418/4444419/4444420/4444421/4444422/4444423/4444424/4444425/4444426/4444427/4444428/4444429/4444430/4444431/4444432/4444433/4444434/4444435/4444436/4444437/4444438/4444439/4444440/4444441/4444442/4444443/4444444/4444445/4444446/4444447/4444448/4444449/44444410/44444411/44444412/44444413/44444414/44444415/44444416/44444417/44444418/44444419/44444420/44444421/44444422/44444423/44444424/44444425/44444426/44444427/44444428/44444429/44444430/44444431/44444432/44444433/44444434/44444435/44444436/44444437/44444438/44444439/44444440/44444441/44444442/44444443/44444444/44444445/44444446/44444447/44444448/44444449/444444410/444444411/444444412/444444413/444444414/444444415/444444416/444444417/444444418/444444419/444444420/444444421/444444422/444444423/444444424/444444425/444444426/444444427/444444428/444444429/444444430/444444431/444444432/444444433/444444434/444444435/444444436/444444437/444444438/444444439/444444440/444444441/444444442/444444443/444444444/444444445/444444446/444444447/444444448/444444449/4444444410/4444444411/4444444412/4444444413/4444444414/4444444415/4444444416/4444444417/4444444418/4444444419/4444444420/4444444421/4444444422/4444444423/4444444424/4444444425/4444444426/4444444427/4444444428/4444444429/4444444430/4444444431/4444444432/4444444433/4444444434/4444444435/4444444436/4444444437/4444444438/4444444439/4444444440/4444444441/4444444442/4444444443/4444444444/4444444445/4444444446/4444444447/4444444448/4444444449/44444444410/44444444411/44444444412/44444444413/44444444414/44444444415/44444444416/44444444417/44444444418/44444444419/44444444420/44444444421/44444444422/44444444423/44444444424/44444444425/44444444426/44444444427/44444444428/44444444429/44444444430/44444444431/44444444432/44444444433/44444444434/44444444435/44444444436/44444444437/44444444438/44444444439/44444444440/44444444441/44444444442/44444444443/44444444444/44444444445/44444444446/44444444447/44444444448/44444444449/444444444410/444444444411/444444444412/444444444413/444444444414/444444444415/444444444416/444444444417/444444444418/444444444419/444444444420/444444444421/444444444422/444444444423/444444444424/444444444425/444444444426/444444444427/444444444428/444444444429/444444444430/444444444431/444444444432/444444444433/444444444434/444444444435/444444444436/444444444437/444444444438/444444444439/444444444440/444444444441/444444444442/444444444443/444444444444/444444444445/444444444446/444444444447/444444444448/444444444449/4444444444410/4444444444411/4444444444412/4444444444413/4444444444414/4444444444415/4444444444416/4444444444417/4444444444418/4444444444419/4444444444420/4444444444421/4444444444422/4444444444423/4444444444424/4444444444425/4444444444426/4444444444427/4444444444428/4444444444429/4444444444430/4444444444431/4444444444432/4444444444433/4444444444434/4444444444435/4444444444436/4444444444437/4444444444438/4444444444439/4444444444440/4444444444441/4444444444442/4444444444443/4444444444444/4444444444445/4444444444446/4444444444447/4444444444448/4444444444449/44444444444410/44444444444411/44444444444412/44444444444413/44444444444414/44444444444415/44444444444416/44444444444417/44444444444418/44444444444419/44444444444420/44444444444421/44444444444422/44444444444423/44444444444424/44444444444425/44444444444426/44444444444427/44444444444428/44444444444429/44444444444430/44444444444431/44444444444432/44444444444433/44444444444434/44444444444435/44444444444436/44444444444437/44444444444438/44444444444439/44444444444440/44444444444441/44444444444442/44444444444443/44444444444444/44444444444445/44444444444446/44444444444447/44444444444448/44444444444449/444444444444410/444444444444411/444444444444412/444444444444413/444444444444414/444444444444415/444444444444416/444444444444417/444444444444418/444444444444419/444444444444420/444444444444421/444444444444422/444444444444423/444444444444424/444444444444425/444444444444426/444444444444427/444444444444428/444444444444429/444444444444430/444444444444431/444444444444432/444444444444433/444444444444434/444444444444435/444444444444436/444444444444437/444444444444438/444444444444439/444444444444440/444444444444441/444444444444442/444444444444443/444444444444444/444444444444445/444444444444446/444444444444447/444444444444448/444444444444449/4444444444444410/4444444444444411/4444444444444412/4444444444444413/4444444444444414/4444444444444415/4444444444444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Revised: 13 March 1962  
\*\*\*\*\*Revised: 4 April 1962

Reference: (See Page One)

AMM 1000-51000 Series

(3) In accordance with Reference (a), the above listed equipment shall be received, bench-checked and installed in the REAL 30-4 aircraft as customer furnished; however, the Detail Specification and handbook shall be revised to include this equipment.

(4) The REAL Detail Specification presently specifies that the galleys are customer furnished, ~~Customer furnished~~. Accordingly, the CPO Section of the Material Department shall requisition purchase orders covering the following galleys in addition to those items listed under Paragraph (2) above:

Description	Qty. per Aircraft	Total Qty.	Price per Aircraft
(1) ELL Galleys	775	775	\$34,500.00 (including delivery)
(2) ELL Stowage Locker	1	1	

Shipment instructions as follow: Ship to VARIG, New York, via Pan American, for arrival not later than December 10, 1961.

\*\*\*\*\*Revised 4/4/62 to delete Ref(1), add Ref. (b) & change Para (2) add Ref. (M) add Ind. Unit under Para (2)(a) & to delete note under same

\*\*\*\*\*Revised 13 March 1962 to add Ref. (1) & change Para (2) add Ref. (M) add Ind. Unit under Para (2)(a) & to delete note under same

\*\*\*\*\*Revised 13 March 1962 to add Ref. (1) & change Para (2) add Ref. (M) add Ind. Unit under Para (2)(a) & to delete note under same

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\*\*\*\*\*Revised 13 March 1962 to add Ref. (1) & change Para (2) add Ref. (M) add Ind. Unit under Para (2)(a) & to delete note under same

CONVAIR DIVISION/CONVAIR

Sales Order

Sold To: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 21 August 1961

Reference: (a) SELL Letter, 11/496/F/T,  
dated 4 August 1961

SO No: 600-8-49

WO No: 31,000 Series

CONVAIR 990 - REAL  
REAL STewardess Hand-SETS AND CONTROL BOXES

(1) The REAL Model 30-8 buffet coordination drawings reflect the stewardess hand-set and related control box shall be installed on the No. 3 buffet by the buffet manufacturer. Accordingly, this Sales Order authorizes the Material Department to forward, prepaid, three (3), only, stewardess hand-sets and two (2), only, control boxes to REAL's buffet manufacturer in Germany. Shipping instructions shall bear the following:

SELL  
Frankfurt Rhein-Main Airport  
ATTENTION: Messrs. Lassen & Co.  
Frankfurt (Main)  
Airport  
Germany

(2) The consignment covering the aforementioned goods shall be accompanied by a proforma invoice stating that the items are being sent to SELL as samples free of charge. Value for customs purposes are as follows:

(a) Stewardess hand-sets -- \$76.50 each  
(b) Control boxes -- \$128.00 each

(3) The control box for REAL's third aircraft is not presently available for shipment to SELL. It will be determined in the near future whether this item for the third aircraft will be installed at SELL or at Convair after receipt of the buffet, at which time this Sales Order will be revised.

(4) Expedited handling is requested in order to support SELL's scheduled shipment date of these buffets to Convair of September 25, 1961.

RHM:hs

Log No. 2519

*P. S. Chambers*  
F. S. Chambers  
Manager of Contracts

REF ID: A65655/COMM/1

Sales Order

To: REAL S/A - Transportes Aéreos  
and Empresa de Transportes  
Brazil S/A

Revised: 18 September 1961

Date: 26 July 1961

SC No: 60-4-48

Reference: (a) REAL Letter FR 38/61  
dated 7 March 1961  
(b) REAL Letter FR 172/61  
dated 18 September 1961

WO No: 31000 Series

CONVAIR 990 - REAL  
REGISTRATION NUMBERS

- (1) REAL Aircraft Registration Nos. PP-VJB, FZ-VJF, and PP-VJG have been assigned for identifying the three (3) Model 30 aircraft, Production Serial Nos. 13, 19, and 20.
- (2) All concerned are to proceed accordingly with this authorization.

DRW:ha

Log No. 2721

Revised to add Ref. (b) and to change  
Registration Numbers.

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

GENERAL DYNAMICS/CONVAIR

~~11/11/61~~ 11/11/61

6-122

No. 41

REAL MINUTES

3 August 1961  
REVISED: 13 Sept. 1961

Model 30-8

Reference (a) Sales Order 600-8-111 Management Decision #163 dt  
(b) CCP #43 10 September 1961  
(c) MCL 62,117 Revised 25 July 1961

RECEIVED

CONVAIR 990 - REAL  
INCREASED FUEL CAPACITY AND RAMP WEIGHT

SEP 13 '61

SPECIFICATIONS &

OFFICIAL

These minutes, by the authority of Reference (a) Sales Order, direct ~~all~~ <sup>Engineering</sup> groups to proceed immediately with the task outlined in Reference (b), Increased Fuel Capacity and Ramp Weight, based upon MCL 62,117, Reference (c).

The task is as follows:

Increase outboard anti-shock body fuel as follows:

1. Replace existing Model 30-5 type outboard anti-shock bodies with Model 30-6 type outboard anti-shock bodies per drawing #30-16047-3 and -4.
2. Replace certain instruments with similar instruments except with red "full" line removed. (Dash number change).
3. Revise 22-91948 placard to change taxi weight and in-flight weight.
4. Change MLG tires from 22 PR to 24 PR.

Increase the fuel capacity of the center section by 45 gallons. This will be accomplished as follows:

1. Raise refuel pilot shutoff valve by substituting a one-inch higher "hat section" to bracket #30-21474.
2. Replace four (4) 3/8" refuel sense lines on isometric drawing #30-21486.

Incorporation of this change results in an increase of 78 pounds guaranteed weight empty per aircraft.

**ACTION:** Engineering shall proceed immediately with the above task under EWO #1009, AWO #31540. An EWO shall be processed by the Father Group (Propulsion Fluids) and forwarded to CIB immediately. This change shall be released to 30-8 #1 and on. Engineering Specification Group shall forward revised Specification pages to Contracts as soon as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer *AF 913*

*V. Greenbaum*  
6140

GENERAL DYNAMICS/CONVAIR

RECEIVED  
SEP 28 '61

REAL MINUTES

SP.IFICATIONS &  
No. 40 OFFICE SERVICES

28 July 1961

Model 30-8

Reference (A) Sales Order 600-8-48 dated 26 July 1961 Revised 18 September 1961

CONVAIR 990 - REAL  
REGISTRATION NUMBERS

PP-VJE PP-VJF and PP-VJC  
As evidenced by Reference (a) Sales Order, Registration Nos. ~~147-1734~~, ~~147-1734~~, ~~147-1734~~,  
and ~~147-1734~~ have been assigned for identifying the three (3) REAL Model 30  
aircraft, Production Serial Nos. 13, 19, and 20.

ACTION: Engineering shall proceed with the above task which is a part  
of the O.D. task. Specification Group shall forward necessary  
revised specification pages to the Contracts Department as soon  
as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer

*JL* 27 Sept. 1961

AJB:JMC:cas

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 3 July 1961

SO No: 600-8-46

Reference: (a) REAL Letter FR 148/61  
dated 29 June 1961  
(b) CCP No. 45  
(c) MCL 62,031

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PITOT STATIC SYSTEM ILLUSTRATION

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Pitot Static System Illustration), based upon MCL 62,031, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.



HMB:hs

Log No. 2160

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

GENERAL DYNAMICS/CONVAIR

REAL MINUTES

No. 39

10 July 1961

Model 30-8

Reference (a) Sales Order 600-8-46 dated 3 July 1961  
(b) MCL 62,031  
(c) CCP #45

CONVAIR 990 - REAL  
REVISION TO PITOT STATIC SYSTEM ILLUSTRATION  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,031, Reference (b).

Description of Change:

Page 51a - PITOT STATIC SYSTEM - ILLUSTRATION

Replace the existing illustration with revised illustration which shows individual EPR probes and separation of static sources for cabin outflow valves and cabin controller for reliability.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.



A. J. Savard  
Project Engineer

AJS:JMC:cas

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aéreos  
and Empresa de Transportes  
Brazil S/A

Date: 3 July 1961

SO No: 600-8-45

Reference: (a) REAL Letter FR 147/61,  
dated 29 June 1961.  
(b) CCP No. 44  
(c) MCL 62,030

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.10.1.2

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.10.1.2), based upon MCL 62,030, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

15/14  
HBD:hc

Log No. 2159

  
F. S. Chambers  
Manager of Commercial Contracts

GENERAL DYNAMICS/CONVAIR

REAL MINUTES

No. 38

10 July 1961

Model 30-8

Reference (a) Sales Order 600-8-45 dated 3 July 1961  
(b) MCL 62,030  
(c) CCP #44

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.10.1.2  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,030, Reference (b).

Description of Change:

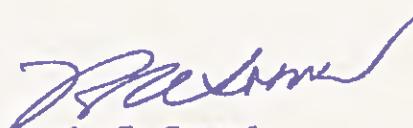
Page 28, Paragraph 3.10.1.2 AILERON SYSTEM:

Revise the fourth sentence as follows:

From: "The control mechanism shall be so designed that, with the airplane on the ground full throw of the control wheel will mechanically produce aileron movement."

To: "The control mechanism shall be so designed that, with the airplane on the ground, full throw of the pilot's control wheel will mechanically produce spoiler, aileron flight tab, and aileron movement. On the ground, aileron movement will not be produced by full throw of the copilot's control wheel. Full spoilers and partial aileron flight tab only shall be activated by the copilot's control wheel on the ground."

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JMC:GAS

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: SAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 3 July 1961

SO No: 600-8-44

Reference: (a) REAL Letter FR 146/61,  
dated 29 June 1961  
(b) CCP No. 19  
(c) MCL 62,029

WO No: 31,000 Series

CONVAIR 990 - REAL  
MANUFACTURER'S NAME AND/OR PART NUMBER

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Manufacturer's Name and/or Part Number, based upon MCL 62,029, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.



HBD:hc

Log No. 2158

  
F. S. Chambers  
Manager of Commercial Contracts

GENERAL DYNAMICS/CONVAIR

REAL MINUTES

No. 37

10 July 1961

Model 30-8

Reference (a) Sales Order 600-8-44 dated 3 July 1961  
(b) MEL 62,029  
(c) CCP #19

Convair 990 - REAL  
MANUFACTURER'S NAME AND/OR PART NUMBER

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MEL 62,029, Reference (b).

The intent of this change is to bring the Appendix I-C section of the specification up to date with the actual part numbers as presently called out on the Engineering drawings.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JMC:cas

GENERAL DYNAMICS/CONVAIR

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A Date: 20 June 1961  
SO No: 600-8-43

Reference: (a) REAL Letter FR 138/61,  
dated 15 June 1961  
(b) CCP No. 41  
(c) MCL 62,027 WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.2.2.1

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.2.2.1), based upon MCL 62,027, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.



EFD:hs

Log No. 2061

  
E. F. S. Chambers  
Manager of Commercial Contracts

*H. G. Mathews*  
6-122

GENERAL DYNAMICS - CONVAIR

REAL MINUTES

No. 36

29 June 1961

Model 30-8

Reference (a) Sales Order 600-8-43 dated 20 June 1961  
(b) MCL 62,027  
(c) CCP #41

RECEIVED

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.2.2.1  
SPECIFICATION ADMINISTRATIVE CHANGE

JUL 5 '61

PROJECT  
SPEC.  
GROUP

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,027, Reference (b).

Description of Change:

Page 9, Paragraph 3.2.2.1 COLOR CODING:

Change the paragraph as follows:

From: "COLOR CODING: All sections of plumbing shall be color coded and banded in accordance with Military Standards and, in addition, marking shall indicate the direction of flow and the purpose of the line. The part number of each tubing assembly shall be identified. Color bands and part number identifications shall be plastic tape of fluid resisting material, in accordance with Standard AND 10375."

To: "COLOR CODING: All sections of plumbing, except engine and within fuel tanks, shall be color coded and banded. All plumbing shall indicate the direction of flow and the purpose of the line. The part number of each tubing assembly shall be identified. Color bands shall be plastic tape in accordance with Standard AND 10375."

Action: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer

CONVAIR-SAN DIEGO

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 6 June 1961

SO No: 600-8-42

Reference: (a) REAL Letter, VR 130/61,  
dated 2 June 1961  
(b) CCP No. 28  
(c) MCL 62,018

WO No: 31,000 Series

---

CONVAIR 990 - REAL  
REVISION TO OXYGEN CYLINDERS

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Oxygen Cylinders), based upon MCL 62,018, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

RECEIVED

JUN 8 '61

PROJECT  
SPEC.  
GROUP

*WHD*

HBD:hs

Log No. 1914

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

*K. Mathews*  
6-122  
GENERAL DYNAMICS - CONVAIR

REAL MINUTES

No. 35

9 June 1961

Model 30-8

Reference (a) Sales Order 600-8-42 dated 6 June 1961  
(b) MCL 62,018  
(c) CCP #28

CONVAIR 990 - REAL  
REVISION TO OXYGEN CYLINDERS  
SPECIFICATION ADMINISTRATIVE CHANGE

RECEIVED  
JUN 12 '61  
PROJECT  
SPEC.  
GROUP

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,018, Reference (b).

Description of Change:

Page 6, Paragraph 3.1.2.2 - TYPICAL LOADING SUMMARY:

Revise the below item under "Fixed Useful Load" as follows:

<u>From:</u>	"Oxygen Bottles (4)	140 lb"
<u>To:</u>	"Oxygen Cylinders (4)	132 lb"

Page A-16, APPENDIX I-C, OXYGEN EQUIPMENT:

Revise the first item under "Description" as follows:

<u>From:</u>	"4 #Cylinder, High Pressure Oxygen (107 cu ft. with gages)	Zep Aero ZC-268-111 140.0"
<u>To:</u>	"4 #Cylinder, High Pressure Oxygen (73 cu ft., with gages)	Zep Aero ZC-268-74-10 132.0"

ACTION: Engineering Specification Section will Forward necessary revised Specification pages to the Contracts Department as soon as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer

CONVAIR - SAN DIEGO

Sales Order

Sold to: REAL S/A - Transportes Aéreos  
and Empresa de Transportes  
Brazil S/A

\*Revised: 17 May 1962  
Date: 1 June 1961

SO No: 600-8-41

Reference: (a) REAL letter FR 127/61,  
dated 31 May 1961.  
(b) CCP No. 34  
(c) MCL 62,094  
(d) Minutes of Meeting - 5/14/62

WO No: 31,000 Series

CONVAIR 990 - REAL  
DOPPLER RADAR, REVISION TO PROVISIONS FOR

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Doppler Radar, Revision to Provisions for, based upon MCL 62,094, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.
- (4) The following items manufactured by Canadian Marconi Company were required by General Dynamics/Convair in order to accomplish the task covered by MCL 62,094. Material Department is hereby authorized to issue a Purchase Order for the following:

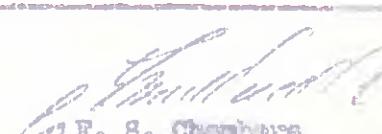
		Unit	3 Aircraft
3	Isolators 316-122	318.65	955.95
3	3 Ft. Lengths RG9B/U		
	Cable C/W UG21B/U Connector	14.75	44.25
3	Sets of Drawings 314-790 314-890		
			E/C

The above itemized equipment is presently installed in Model 30-8 aircraft, Serial Nos. 13, 19 and 20.

  
HED:ha

File No. 1089

\*Revised to add Ref. (d) & Para. (4).

  
F. S. Chambers  
Manager of Commercial Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

*K. M. [Signature]*

6-122

REAL MINUTES

6 June 1961

Model 30-8

No. 34

Reference: (a) Sales Order #600-8-41 dated 1 June 1961  
(b) MCL #62,094  
(c) CCP No. 34

CONVAIR 990 - REAL

DOPPLER RADAR, REVISION TO PROVISIONS FOR

REAL has accepted, as evidenced by Reference (a), Convair's proposal, reference (c), based upon MCL 62,094, reference (b).

The task is as follows:

A. On electronic rack shelf "P" (22-32550-3) revise existing doppler tracker unit provisions from ARINC 540 1/2 ATR size to 3/4 ATR to accommodate future installation of Canadian Marconi CMA-625 unit.

B. Relocate existing doppler computer provisions on electronic rack shelf "P" to provide space for the enlargement of tracker unit provisions. (See A above)

NOTE: The antenna installation is compatible with existing provisions only if Canadian Marconi provides an adapter to install their antenna within the wing cavity.

**RECEIVED**

JUN 7 '61

PROJECT  
SPEC.  
GROUP

ACTION: Cost and Schedules shall issue an EWO number to the affected Design Groups, authorizing immediate go-ahead. Cost and Schedules shall subsequently prepare and process an EWO form which shall reflect the task authorized by Sales Order Minutes. The EWO shall reflect the O/B and E/C schedules of 7/24 and 8/17 respectively as listed in the Action Record dated 25 April 1961. Specification Group shall forward revised Specification pages to Contracts as soon as practicable.

*A. J. Savard*  
A. J. Savard  
Project Engineer

CONVAIR-SAN DIEGO

Accounting Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A  
Sao Paulo, Brazil

Date: 31 May 1961  
SO No: 600-8-40  
WO No: 31,000 Series

CONVAIR 990 - REAL

CHANGE ORDER NO. 6

(1) Attached is a copy of Change Order No. 6 signed by REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A, which amends Detail Specification Report No. ZD-30-008, dated 2 May 1960, to incorporate the Specification Change Nos. 12, 13, 14, 15, 17, 18, 21, 22, 24, 25, 26, and 29, set out in Paragraph VI of said Change Order.

  
HBD:hs

Log No. 1879

  
F. S. Chambers  
Manager of Commercial Contracts

cc: (all with attachment)

R. F. Ashe  
Arthur Anderson & Co.  
G. H. Blain  
G. T. Bovee  
D. C. Burrows  
F. S. Chambers  
G. A. Dies, Jr.  
D. H. Digges  
J. D. Kiland  
R. D. Evans  
O. W. Harper (v/attach. 2)  
A. L. Hendricks  
R. R. Hoover (v/attach. 2)

W. J. Jason  
H. A. Kayes  
V. S. Mathews (v/attach. 2)  
C. L. Meadow  
R. C. Neal (v/exec. copy)  
A. G. Rothlisberg  
C. C. Sawyer  
I. D. Sykes  
R. K. Waldo  
R. B. Watts  
J. G. Zeveloy  
File (2)

CHANGE ORDER NO. 6

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
and General Dynamics Corporation (Convair Division)

I. The Detail Specification Report ZD-30-008 is hereby amended to reflect certain changes all as more particularly set forth in Specification Change Nos. 12, 13, 14, 15, 17, 18, 21, 22, 24, 25, 26, and 29, Commercial Change Proposal Summary No. 2 and Specification Revision Pages dated 20 March 1961 attached hereto and made a part hereof.

II. Airplanes Affected:

Undelivered - 3

III. Effect on weight and balance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 2 attached.

IV. Effect on performance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 2 attached.

V. Effect on delivery:

None

VI. This Change Order results in the following charges and/or credits:

A. Change No. 12--Structural Design Speed Limit for Flap and Leading Edge Device Operation with Single Hydraulic System Operating - Page 30	No Charges or Credits
B. Change No. 13--Alternate Control Cable Material - Page 28	No Charges or Credits
C. Change No. 14--Seat, Cabin Attendant, Additional; Installation of - Pages 1, 3b, 6, 9, 89, 90, 92, 104a, and A-1	No Charges or Credits
Total Non-recurring Charges	\$ 9,645
Recurring Charge per Aircraft	761
Total Charges for 3 Aircraft	\$ 11,928

## CHANGE ORDER NO. 6

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and betweenREAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
and General Dynamics Corporation (Convair Division)

D. Change No. 15--Enlarged Buffet Stowage Cabinet,  
Installation of - Pages 3b, 13, 93, 93a, 98,  
100, A-1, and A-14

Total Non-recurring Charges	\$ 4,803
Recurring Credit per Aircraft	1,188
 Total Charges for 3 Aircraft	 \$ 1,239

E. Change No. 17--Revision to External Service  
Power System Language - Page 70

No Charges or Credits

F. Change No. 18--Clarification of Interphone  
Station Locations - Page 84

No Charges or Credits

G. Change No. 21--Pilot and Copilot Seats,  
Change to - Page A-14

No Charges or Credits

H. Change No. 22--Horizontal Stabilizer  
Mechanical Motion Indicator System,  
Installation of - Page 29

No Charges or Credits

I. Change No. 24--Change Drip Stick Calibration  
from Pounds to Inches - Page 41

No Charges or Credits

J. Change No. 25--Revision to Lavatory Lighting  
Language and Correction to X-Band Antenna  
P/N - Pages 68 and A-11

No Charges or Credits

K. Change No. 26--Replace Flight Illustration  
and Change Cabin Thermometer from F. to C. -  
Pages vii and 110

No Charges or Credits

L. Change No. 29--Revision to Pilot and  
Copilot Seat Interchangability -  
Pages 89 and 116

No Charges or Credits

M. Summary of the foregoing charges and/or  
Credits:

Total Non-recurring Charges	\$ 14,448
Total Recurring Credit	1,281
 Total Charges for 3 Aircraft	 \$ 13,167

CHANGE ORDER NO. 6

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
and General Dynamics Corporation (Convair Division)

---

VII. The attached Commercial Change Proposal Summary No. 2 and revised Specification Pages dated 20 March 1961 are hereby incorporated into and become a part of Detail Specification Report No. ZD-30-008 dated 2 May 1960.

VIII. Except as herein modified all provisions of the Purchase Agreement and the Detail Specification shall remain in effect.

GENERAL DYNAMICS CORPORATION

By: /s/ F. S. Chambers

Title: Manager of Commercial Contracts

Accepted and Agreed to as of  
this 23rd day of May 1961.

REAL S/A - TRANSPORTES AEREOS

By: /s/ Eduardo M. Alvarenga

Title: Director

EMPRESA DE TRANSPORTES AEROVIAS BRAZIL S/A

By: /s/ Eduardo M. Alvarenga

Title: Director

CONVAIR - SAN DIEGO

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 29 May 1961

SO No: 600-8-39

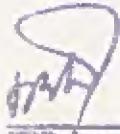
Reference: (a) REAL Letter, FR 122/61,  
dated 26 May 1961  
(b) CCP No. 39  
(c) MCL 62,026

WO No: 31,000 Series

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CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.16.8.2.3

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.16.8.2.3), based upon MCL 62,026, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

  
HBD:hs

Log No. 1853

  
F. S. Chambers  
Manager of Commercial Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

6 June 1961

No. 33

Model 30-8

Reference: (a) Sales Order 600-8-39 dated 29 May 1961  
(b) MCL #62,026  
(c) CCP No. 39

CONVAIR 990 - REAL

REVISION TO PARAGRAPH 3.16.8.2.3

SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, reference (c), based upon MCL 62,026, reference (b).

Description of Change:

Page 67, Para. 3.16.8.2.3 PEDESTAL AND OVERHEAD PANEL LIGHTING:

Delete the last two sentences which read as follows:

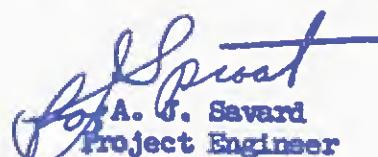
"Separate control shall be provided for the forward and aft pedestal panels. The forward panel light control shall be located on forward panel."

RECEIVED

JUN 7 '61

PROJECT  
SPEC.  
GROUP

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JMC:re

CONVAIR - SAN DIEGO

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 29 May 1961

SO No: 600-8-38

Reference: (a) REAL Letter, FR 121/61,  
dated 25 May 1961  
(b) CCP No. 38  
(c) MCL 62,025

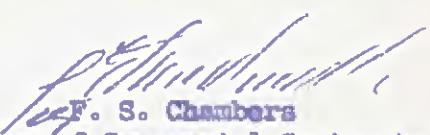
WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO FIRE CONTROL PANEL AND WARNING HORN DIAGRAM ILLUSTRATIONS

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Fire Control Panel and Warning Horn Diagram Illustrations), based upon MCL 62,025, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

  
HBD:ha

Log No: 1849

  
F. S. Chambers  
Manager of Commercial Contracts

*V. Matthews*

REAL MINUTES

no. 32 6-13-

2 June 1961

*Fitz*

Model 30-8

Reference (a) Sales Order 600-8-38 dated 29 May 1961  
 (b) CCP 38  
 (c) MCL 62,025

CONVAIR 990 - REAL  
REVISION TO FIRE CONTROL PANEL AND WARNING HORN DIAGRAM ILLUSTRATIONS  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted by Reference (a), Convair's proposal, Reference (b), based upon MCL 62,025, Reference (c).

Description of Change:

Page vi, LIST OF ILLUSTRATIONS:

Revise the below item as follows:

From: "Warn Horn, Landing Gear Control and Landing Gear Position Systems" 73a"

To: "Warning Horn Diagram" 73a"

Page 48d, FIRE CONTROL PANEL:

Replace the existing illustration in the specification with a revised illustration which includes wheel well indicator lights.

Page 73a, WARM HORN LANDING GEAR CONTROL & LANDING GEAR POSITION SYSTEMS:

Replace the existing illustration with the revised illustration which includes all warning circuits, to make it consistent with the actual installation, and to standardize illustration title.

ACTION:

Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

*A. J. Savard*  
 A. J. Savard  
 Project Engineer

RECEIVED

AJSDMC:cas

JUN 6 '61

PROJECT  
SPEC.  
GROUP

W. Fitzsimons  
6-122

REF ID: A

SEP 11 '61

**SPECIFICATIONS &  
OFFICE SERVICES**

**CONYARD CO. - DEAL  
IN THE FINEST EQUIPMENT**

C A N C E L L E D

(1) Schedule (a) sets forth the items of equipment which will be wanted by USAF for installation in their Convair 990 aircraft pursuant to Appendix I-A of Material Specification Report No. ZD-30-108 dated 2 May 1960.

(2) Material Department, CPO Section, is requested to requisition a purchase order covering the items set out in the requirement schedule under Reference (a). The on deck need dates reflected in said schedule should be reflected in the purchase order. When prices for material being wanted have been established by the customer, such information will be provided the Purchasing Department by memorandum.

(3) The Purchase Order is to be directed to the following address (with copies to D. H. Stilman, Air Carrier Service Corporation, 1510 H Street, Northwest, Washington 5, D. C.) and is to contain shipping and special instructions set forth below:

~~ADDRESS:~~ REAL ESTADOS UNIDOS, S. A.  
Rua Conselheiro Crispiniano  
379-2º Andar  
Sao Paulo, Brazil  
Attentiu: Dr. Eduardo Alvarenga

~~SHIPPING INSTRUCTIONS:~~  
Sh. to: Conval Receiving Department  
Rancho Canyon Facility  
San Diego, California  
Attention: CPT Stores

NOTE: (a) All equipment is to be clearly identified as MAJ Airlines equipment.  
(b) Not to be paid by check.  
(c) As required, FAA qualification or adequate substantiating data of  
MAJ's responsibility.

The Receiving Department is to forward the above material upon receipt to GTR. Same to be held for ultimate installation in the customer's aircraft and to furnish to the Contracts Department one copy of the Receiving Report showing results of inspection for transmission to the customer.

These are the details for the customer in question with their first order.

## THE USE OF AGENT-ORIENTED GAMES

When you are ready for a trial, using money by RIAI. Airlines have been asked to make a donation which is to be used to help the poor will be furnished.

Therefore as possible, all items received and installed hereunder are to be functional and for correct operation and also for correct functioning of the related aircar system.

264

*610* ~~Supvised to add Part (7)~~  
~~Revised to cancel: superseded by~~  
~~Sales Circular 600-8-50.~~

CONVAIR - SAN DIEGOSALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 15 May 1961

SO No: 600-8-36

Reference: (a) REAL Letter, FR 112/61,  
dated 12 May 1961  
(b) CCP No. 37  
(c) MCL 62,024

WO No: 31,000 Series

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CONVAIR 990 - REAL  
REVISION TO PILOTS' PEDESTAL ILLUSTRATION

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Pilots' Pedestal Illustration), based upon MCL 62,024, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.



HBD:md

Log No. 1734



F. S. Chambers  
Manager of Commercial Contracts

CONVAIR-SAN DIEGO/CONVAIR DIVISION OF GENERAL DYNAMICS CORPORATION

REAL MINUTES

No. 31

16 May 1961

Model 30-8

Reference (a) Sales Order 600-8-36 dated 15 May 1961  
(b) MCL 62,024  
(c) CCP #37

CONVAIR 990 - REAL  
REVISION TO PILOT'S PEDESTAL ILLUSTRATION  
SPECIFICATION ADMINISTRATIVE CHANGE

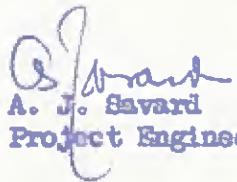
REAL has accepted, as evidenced by Reference (a), Convair's proposal, reference (c), based upon MCL 62,024, Reference (b).

Description of Change:

Page 47b, PILOT'S AND COPILOT'S PEDESTAL:

Replace the above illustration in the specification with a new enclosure which revises the stabilizer trim control, adds "AFC-DUAL PROVISIONS", "FLAP ASYMMETRY TEST SWITCH", "FUSIE-PEDESTAL LIGHTS", "WARNING HORN CUTOFF SWITCH", and shows minor nomenclature changes in callouts.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JMC:cas

CONVAIR - SAN DIEGO

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Reference: (a) REAL Letter, FR 111/61,  
dated 12 May 1961  
(b) CCP No. 35  
(c) MCL 62,023

SALES ORDER

Date: 15 May 1961

SO No: 600-8-35

WO No. 31,000 Series

CONVAIR 990 - REAL  
REARRANGEMENT OF INSTRUMENTS AND REVISION  
TO PILOTS' INSTRUMENT PANEL ILLUSTRATION

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Rearrangement of Instruments and revision to Pilots' Instrument Panel Illustration), based upon MCL 62,023, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.



HBD:md

Log No. 1735

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

CONVAIR-SAN DIEGO/CONVAIR DIVISION OF GENERAL DYNAMICS CORPORATION

REAL MINUTES

No. 30

16 May 1961

Model 30-8

Reference (a) Sales Order 600-8-35 dated 15 May 1961  
(b) MCL 62,023  
(c) CCP #35

CONVAIR 990 - REAL  
REARRANGEMENT OF INSTRUMENTS AND REVISION  
TO PILOTS' INSTRUMENT PANEL ILLUSTRATION  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,023, Reference (b).

Description of Change:

Page 34, Paragraph 3.12.4.3 TACHOMETER GENERATORS:

Delete the second sentence which reads as follows:

"A warning light shall be installed on the pilots' center instrument panel for each fan tachometer to indicate overspeeding."

Page 47, Paragraph 3.14.1.1 PILOT'S INSTRUMENTS:

Add the following item to the instrument list:

"One true airspeed indicator"

Page 47, Paragraph 3.14.1.2 COPILOT'S INSTRUMENTS:

Delete the below item from the instrument list:

"One true air speed indicator"

Page 47a, PILOTS' AND COPILOTS' INSTRUMENT PANEL:

Replace the above illustration in the specification with revision which agrees with the actual instrument arrangement.

Page 48, Paragraph 3.14.1.3 CENTER PANEL INSTRUMENTS:

Add the following item to the instrument list:

"Four engine fan tachometer indicators"

Page 48, Paragraph 3.14.1.4 FLIGHT ENGINEER'S INSTRUMENTS:

Delete the below item from the instrument list:

"Four engine fan tachometer indicators"

## Page A-6, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the below item under "ENGINE INSTRUMENTS - GENERAL" as follows:

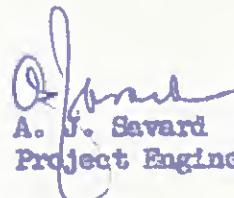
From: "4 Indicator, Tachometer (Fan) Gen. Elect. 8DJ81LAT-1"

TO: "4 Indicator, Tachometer (Fan) Gen. Elect. 8DJ81LAT-1  
or -2"

The following shall not appear in the specification language:

The deletion of the fan tachometer overspeed indicator lights is proposed since this warning feature will not be required with the fan tachometer indicators being located on the center engine panel. Also, the relocation of these indicators to the engine panel necessitates activation of integral lighting of these instruments.

**ACTION:** Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JMC:cas

CONVAIR - SAN DIEGO

Sales Order

Sold to: REAL S/A - Transportes Aereo  
and Empresa de Transportes  
Brazil S/A Date: 1 May 1961  
SO No: 600-8-34

Reference: (a) REAL Letter, FR 100/61,  
dated 28 April 1961  
(b) CCP No. 33  
(c) MCL 62,022 WO No: 31,000 Series

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CONVAIR 880 - REAL  
REVISION TO PARAGRAPH 3.12.9.7.1, APPENDIX I-C  
AND EMERGENCY EXIT FLOW ILLUSTRATION

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Paragraph 3.12.9.7.1, Appendix I-C and Emergency Exit Flow Illustration), based upon MCL 62,022, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*MMJ*  
MBD:hs

Log No. 1639

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

REAL MINUTES

No. 29

11 May 1961

Model 30-8

Reference (a) Sales Order 600-8-34 dated 1 May 1961  
(b) MCL 62,022  
(c) CCP #33

CONVAIR 990 - REAL  
REVISION TO PARAGRAPH 3.12.9.7.1, APPENDIX I-C  
AND EMERGENCY EXIT FLOW ILLUSTRATION  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,022, Reference (b).

Description of Change:

Page 20a, EMERGENCY EXIT FLOW AND ESCAPE FACILITIES:

Replace the above illustration in the specification with the Revised Page 20a.

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MAY 12 '61

PROJECT  
SPEC.  
GROUP

Page 40, Paragraph 3.12.9.7.1 GENERAL:

Delete the first six lines at top of page 40.

Page A-17, APPENDIX I-C, PYROTECHNICS:

Delete the below item under "Description":

"2 Flare Dispensers Convair (P/N to be supplied)"

The following shall not appear in the specification language:

That portion of Paragraph 3.12.9.7.1 appearing at the top of Page 40, is repetitious in part with the complete paragraph on Page 39. Therefore, deletion of the Page 40 portion of Paragraph 3.12.9.7.1 is proposed.

The deletion of flare dispensers from the Appendix section of specification is proposed for consistency with Convair policy not to list items manufactured by Convair. This equipment is given adequate coverage in Paragraph 3.19.2.6.1.

The "Emergency Exit Flow" illustration presently in specification, was preliminary. Revised Page 20a shows the actual airplane exit flow arrangement.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. P. Savard  
Project Engineer

AJS:JMC:cas

3 Jun 1961

6-122

Revised: 8 May 1961

1684 - CONVAIR 900 - REAR  
and Project 23 Specification  
Revised 8 May 1961

Reference (a) 1684 Letter, 16 Jun 61,  
dated 25 April 1961

(b) CCR 23-23

(c) 1684 Letter, 16 Jun 61

1684 - CONVAIR 900 - REAR

RECEIVED  
MAY 10 '61  
PROJECT  
SPEC  
GROUP

CONVAIR 900 - REAR  
PROJECT 23 REVISIONS TO SPECIFICATION LAMINAR

(1) This accepted by Reference (a), Convair's proposal, Reference 1684, Laminar Flow Inlet Change (Miscellaneous Invitations to Bid) Specification Lam-900, based upon MIL-6-14. Accordingly, all statements contained are directed to proceed with incorporation of the changes as outlined in Reference (a).

Engineering Specification Section will forward revised revised  
Specification page to the Customer Department as soon as possible.

This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

(4) This Sales Order revised to delete that much of CCR 23 which calls for the deletion of control panels, 1 Selcal (dual channel) in Appendix I-C, Electronic Equipment.

1684-2

1684

Revised to add Page- (4).

John S. Chambers  
Manager of Commercial Programs

1684  
1684

REAL MINUTES

No. 28

10 May 1961

Model 30-8

Reference (a) Sales Order 600-8-33 dated 26 April 1961, Revised 8 May 1961  
(b) MCL 62,014  
(c) CCP #23

CONVAIR 990 - REAL  
MISCELLANEOUS REVISIONS TO SPECIFICATION LANGUAGE  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,014, Reference (b).

Description of Change:

Page 55, Paragraph 3.15.1.1 - Description and Components:

In the fourth line, delete the word "boost"

In the eighth line, add "rudder" between "devices" and "fuel"

Page 67, Paragraph 3.16.8.3.6 - Signs:

Revise the first paragraph to read as follows:

"Illuminated and legible "NO SMOKING" and "FASTEN SEAT BELTS" signs shall be provided in the passenger cabin and a "RETURN TO CABIN" sign shall be provided in each lavatory. An illuminated sign shall be installed on the aft surface of each of the three passenger compartment dropped ceilings which shall read as follows: "NO SMOKING-FASTEN SEAT BELT". Another forward illuminated sign shall be installed on the aft face of the pilots' door drop ceiling in the passenger compartment entryway area and shall read as follows: "LAVATORIES-VACANT-OCCUPIED". A switch for the "NO SMOKING" sign and a switch for the "FASTEN SEAT BELT" and "NO SMOKING" signs shall be installed which shall automatically illuminate these signs whenever the oxygen masks are popped out".

In the eighth line of second paragraph, change "both" to "the".

Add the following to the end of second paragraph:

"An illuminated "NO SMOKING" and "FASTEN SEAT BELT" sign shall be installed on the sidewall, or at a suitable location, in the crew rest area".

Page 69, Paragraph 3.16.8.3.8 - Buffet and Coat Compartment Lighting:

In the sixth line, insert the word "fixed" between "the" and "coat".

Page 99, Paragraph 3.19.3.1.2 - Movable Coat Dividers:

Revise the next to the last sentence as follows:

From: "Each right hand coat divider shall include an illuminated "NO SMOKING" and "FASTEN SEAT BELT" sign (Portuguese and English)"

To: "An illuminated "LAVATORIES-VACANT-OCCUPIED" sign shall be installed on the forward right hand coat divider, and illuminated "NO SMOKING" and "FASTEN SEAT BELT" signs shall be installed on the aft right hand coat divider (Portuguese and English)"

Page A-13, Appendix I-C, Landing Gear Equipment:

In "Tire, Nose Wheel", change "Tread Depth" from ".32" to ".31"

Page A-15, Appendix I-C, Convair Furnished:

Change the below item under "Description" as follows:

From: "3 Reel, Inertia"

To: "4 Reel, Inertia"

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

AJS:JS:cas

CONVAIR - SAN DIEGO

Sales Order

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 20 April 1961  
SO No: 600-8-32

Reference: (a) REAL Letter, FR 89/61,  
dated 20 April 1961  
(b) CCP No. 32  
(c) MCL 62,021

WO No: 31,000 Series

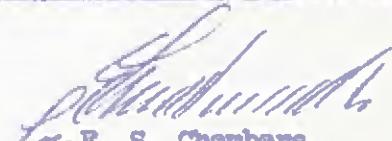
CONVAIR 990 - REAL  
REVISION TO LEADING EDGE DEVICE AND FLAP OPERATION LANGUAGE

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Leading Edge Device and Flap Operation Language), based upon MCL 62,021. Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

1779

RBD:hs

Log No. 1566

  
P. S. Chambers  
Manager of Commercial Contracts

REAL MINUTES

No. 27

25 April 1961

Model 30-8

Reference (a) Sales Order 600-8-32 dated 20 April 1961  
(b) MCL 62,021  
(c) CCP 32

CONVAIR 990 - REAL  
REVISION TO LEADING EDGE DEVICE AND FLAP OPERATION LANGUAGE  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,021, Reference (b).

Description of Change:

Page 30, Paragraph 3.10.2.1 LIFT AND DRAG INCREASING DEVICE SYSTEMS:

Revise the second sentence as follows:

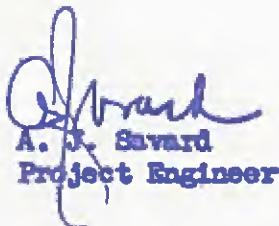
From: "Each control system shall be operated by a hydraulic motor driven gear box located in the fuselage and powered by both hydraulic systems."

To: "The leading edge device control system shall be operated by a hydraulic motor driven gear box located in the fuselage and powered by both hydraulic systems. The trailing edge flap control system shall be operated by a hydraulic motor driven gear box located in the fuselage and powered normally by one hydraulic system with the other hydraulic system available as a pilot selected alternate."

Page 55a, HYDRAULIC SYSTEM:

Revised illustration which shows 100 percent flap power available from either No. 1 or No. 2 System.

ACTION: Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

CONVAIR - SAN JIBCO

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Expresso de Transportes  
Brazil S/A

Date: 31 March 1961

SO No: 600-8-31

Reference: (a) REAL Letter, PR 73/61,  
dated 29 March 1961  
(b) CCP No. 27  
(c) MCL 62,093

WO No: 31,000 Series

CONVAIR 990 - REAL  
ADJUSTABLE HEAD RESTS, DELETION OF

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Adjustable Head Rests, Deletion of, based upon MCL 62,093, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in a decrease of 56 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

1/14  
EBC:bs

Log No: 1410

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

V. Mathews 6-122

CONVAIR-SAN DIEGO/CONVAIR DIVISION OF GENERAL DYNAMICS CORPORATION

REAL MINUTES

No. 25

12 April 1961

Model 30-8 and  
30-5 #26 through 38

Reference (a) S. O. 600-8-31 dated 31 March 1961  
(b) MCL 62,093  
(c) CCP #27

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CONVAIR 990 - REAL  
ADJUSTABLE HEAD RESTS, DELETION OF

REAL has accepted by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,093, Reference (b).

Description of Change:

Page 91, Paragraph 3.19.1.1.6 PASSENGER SEATS:

Delete the 17th sentence which reads as follows:

'All first class seats shall be provided with adjustable headrests, except the forwardmost left hand aft facing seat.'

Incorporation of this change results in a decrease of 56 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

These minutes authorize immediate go-ahead on the above task. Budget required shall be negotiated. EWO's shall be prepared immediately for submittal to CIB to resolve schedule incompatibility.

  
A. J. Savard  
Project Engineer

AJS:JMC:cas

*W. J. Brown*  
CONVAIR - San Diego

SALES ORDER

*6-122*

Sold to: REAL S/A - Transportes Aereos  
and Empreza de Transportes  
Brazil S/A

Date: 10 March 1961

SO No: 600-8-30

Reference: (a) REAL Letter, FR 43/61,  
dated 10 March 1961  
(b) CCP No. 15  
(c) NCL 62,089

WO No: 31,000 Series

CONVAIR 990 - REAL  
ENLARGED BUFFET STOWAGE CABINET, INSTALLATION OF

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Enlarged Buffet Stowage Cabinet, Installation of, based upon NCL 62,089, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 40 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

**RECEIVED**

**MAR 13 '61**

**PROJECT  
SPEC.  
GROUP**

*WJD*  
HBD:bs

Log No: 1157

*WJD*  
7-7 P. S. Chambers  
Manager of Commercial Contracts

*H. Mathews*  
6-122

REAL MINUTES

No. 24

3 April 1961

Model 30-8

Reference (a) Sales Order 600-8-30, dated 10 March 1961  
 (b) MCL 62,089  
 (c) CCP No. 15  
 (d) AVO Chief Engineer dated 28 March 1961

ENLARGED BUFFET STOWAGE CABINET, INSTALLATION OF

Real has accepted by Reference (a), Convair's proposal, Reference (b) based upon MCL 62,089, Reference (c).

Description of ChangeINTERIOR ARRANGEMENT - STANDARD AND MIXED SEATING (Page 3b)

Illustration will be revised to show enlarged buffet storage cabinet in lieu of existing smaller buffet cabinet and forward L.H. coat rack.

## Page 13, Paragraph 3.4.4 LOADS:

Revise the last item in the paragraph as follows

From: "Buffet Stowage Cabinet"

400.0 lb"

To: "Buffet Stowage Cabinet"

800.0 lb"

*RECEIVED*  
 APP. 5 '61  
 PROJECT SPEC. GROUP

## Page 3.19.2.1.1 BUFFET:

Revise the fifth sentence as follows:

From: "A Buyer furnished stowage locker shall be installed forward of the forward left hand coat stowage divider for buffet service items."

To: "A Buyer furnished stowage cabinet for buffet service items shall be install on the forward left hand side of the airplane in such position that aft face of cabinet is in line with the aft face of forward right hand movable coat divider. The lower aft portion of this stowage cabinet shall be provided with a footwell."

## Page 93a, PLAN VIEW - BUFFETS:

Illustration will be revised to show enlarged cabinet for buffet service stowage in lieu of existing smaller buffet cabinet.

## Page 98, Paragraph 3.19.3.1.2 MOVEABLE COAT DIVIDERS:

Revise the first and second sentences as follows:

From: "Movable coat dividers, consisting of one right hand assembly and one left hand assembly, shall be installed. One set shall be installed forward, and one set shall be installed to divide the first class and coach passengers; all as shown on page 3b - INTERIOR ARRANGEMENT - STANDARD MIX."

To: "Movable coat dividers consisting of two right hand units and one left hand unit shall be installed. One right hand and left hand unit shall be installed to divide the first class and coach passengers, and one right hand unit shall be installed forward; all as shown on Page 3b - INTERIOR ARRANGEMENT - STANDARD - MIXED."

Page 100, Paragraph 3.19.3.5 CURTAINS AND SHADES:

Revise the fourth sentence as follows:

From: "Aisle curtains shall be installed at the forward and aft movable coat dividers."

To: "Aisle curtains shall be installed between the forward right hand movable coat divider and the buffet stowage cabinet and at the aft movable coat dividers."

Page A-1, APPENDIX I-A, BUYER FURNISHED - CONVAIR INSTALLED:

Revise the below item under "Description" as follows:

From: "1 Stowage locker, Buffet Service 100.0"

To: "1 Stowage Cabinet, Buffet Service 200.0"

Page A-14, APPENDIX I-C, FURNISHINGS:

Revise the below item under "Description" as follows:

From: "2 Divider, Movable Coat (L.H.) (Including Storage Box) Convair"

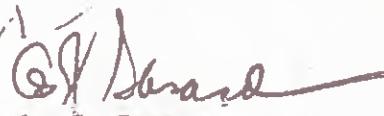
To: "1 Divider, Movable Coat (L.H.) (Including Storage box) Convair"

Effect on Weight Empty: +40.0 pounds

Effect on Balance +19,800 inch-pounds

Effect on Performance: None

**ACTION:** Engineering is authorized by reference (a) to proceed immediately with the task described in reference (b). EWO's are to be submitted to Cost and Schedules within 10 days and shall be in agreement with the task estimated cost and schedules of reference (b). Specification revisions in accordance with reference (c) are to be forwarded to Contracts.

  
A. J. Savard  
Project Engineer

*7-16 Telgatmons*  
CONVAIR - San Diego

SALES ORDER

*6-122*

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil S/A

Date: 8 March 1961

SO No: 600-8-29

Reference: (a) REAL Letter, IRN-FR 34/61,  
dated 6 March 1961  
(b) CCP No. 29  
(c) MCL 62,019

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO PILOT AND COPILOT SEAT INTERCHANGEBILITY

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Pilot and Copilot Seat Interchangability), based upon MCL 62,019. Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*RECEIVED*

*MAR 10 '61*

*PROJECT  
SPEC.  
GROUP*

*aff*  
HBD:hs

Log No. 211-2

*H. H. Chambers*

*For F. S. Chambers  
Manager of Commercial Contracts*

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

No. 22

15 March 1961

Model 30-8

Reference (a) Sales Order 600-8-29 dated 8 March 1961  
(b) MCL 62,019  
(c) CCP #29

CONVAIR 990 - REAL  
REVISION TO PILOT AND COPILOT SEAT INTERCHANGEABILITY  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,019, Reference (b).

Description of Change:

Page 89, Paragraph 3.19.1.1.2 - PILOT'S AND COPILOT'S SEATS:

Delete the fourth sentence which reads as follows:

"The pilot's and copilot's seats shall be interchangeable between stations by relocating adjustment controls from left to right side of seat or vice versa and transfer of log book holder".

Page 116, Paragraph 3.23.2 - EQUIPMENT INTERCHANGEABILITY:

Revise the below item under "a. Interchangeable Parts" as follows:

From: "Pilot's and Copilot's seat assembly (with exceptions noted in 3.19.1.1.2)"

To: "Pilot's Seat Assembly  
Copilot's Seat Assembly"

ACTION: Engineering Specification Section will forward necessary revised Specification Pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 7 March 1961

SO No: 600-8-28

Reference: (a) REAL Letter, FR 37/61  
dated 7 March 1961,  
(b) CCP No. 14  
(c) MCL 62,096

WO No: 31,000 Series

CONVAIR 990 - REAL  
SRAT, CABIN ATTENDANT, ADDITIONAL; INSTALLATION OF

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Sent, Cabin Attendant, Additional; Installation of, based upon MCL 62,096. Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 48 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

  
HBD:hs

Log No: 1091

  
F. S. Chambers  
Manager of Commercial Contracts

REAL MINUTES

No. 23

11 April 1961

Model 30-8

Reference (a) Sales Order 600-8-28 dated 7 March 1961  
(b) MCL 62,096  
(c) CCP #14  
(d) AVO Chief Engineer dated 11 April 1961

CONVAIR 990- REAL

SEAT, CABIN ATTENDANT, ADDITIONAL; INSTALLATION OF

REAL has accepted by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,096, Reference (b).

Description of Change:

Page 1, Paragraph 1.1 BASIC TYPES:

In the seventh line, change "71" to "72".

Page 3b, INTERIOR ARRANGEMENT - STANDARD AND MIXED SEATING:

Above illustration will be revised to show a cabin attendant seat on the inboard end of No. 1 Buffet.

Page 6, Paragraph 3.1.2.2 TYPICAL LOADING SUMMARY:

In third line from top, change "(103-passenger)" to "(104-passenger)".

Under "Space Limit Payloads", delete the asterisk before "Passenger" and change "(103)" to "(104)", and "(71)" to "(72)"; change "16,995" to "17,160", change "32" to "33", change "2,112" to "2,178", change 5,894" to "6,828", change "29,125" to "29,290".

Delete the single asterisk note on lower part of page which reads:

"One of five cabin attendants is assumed in a coach seat."

Page 9, Paragraph 3.2.1 GENERAL INTERIOR ARRANGEMENTS:

In the first sentence, change "103-passenger" to "(104-passenger)".

Page 89, Paragraph 3.19.1 GENERAL:

In the first sentence, change "103 passengers" to "104 passengers".

Page 90, Paragraph 3.19.1.1.4 CABIN ATTENDANTS' SEATS

In the first sentence, change "Three" to "Four".

Add the following after the fourth sentence:

"One Buyer-furnished single seat on the inboard end of No. 1 buffet."

Page 92, Paragraph 3.19.1.1.7 SAFETY BELTS:

Revise the fourth sentence as follows:

From: "The aft stewardess safety belt and shoulder harness shall be Buyer furnished."

To: "The aft cabin attendant seat and cabin attendant seat at No. 1 Buffet shall be provided with Buyer furnished safety belts and shoulder harnesses."

Page 104a, GASEOUS OXYGEN SYSTEM:

Above illustration will be revised to show oxygen facility at forward buffet area for use of cabin attendant.

Page A-1, APPENDIX I-A, BUYER FURNISHED - CONVAIR INSTALLED:

Revise the first item as follows:

From: "5 Buffets (including decorative trim panels closing trim and provisions for insert and storage items, one stewardess seat, safety belt and shoulder harness)" 1348.0

To: "5 Buffets (including decorative trim panels, closing trim and provisions for insert and storage items, two cabin attendant seats, two safety belts, and two shoulder harnesses)." 1383.0

This change results in a weight increase of 48 pounds per aircraft.

**ACTION:** Engineering is authorized by reference (d) to proceed immediately with the task described above. Engineering shall be released on an expedited basis on modification type drawings. Specification group shall forward revised specification pages to contracts as soon as practical. Engineering shall process an EWO to accomplish this task reflecting the O/B date of 4/17 and F/R date of 5/8 as reflected upon the Action Record Sheet dated 1/27/61.

*A. J. Savard*  
A. J. Savard  
Project Engineer

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 15 February 1961

SO No: 600-8-27

Reference: (a) REAL Letter, MAN-043/61,  
dated 8 February 1961  
(b) CCP No. 18  
(c) MCL 62,012

WO No: 31,000 Series

CONVAIR 990 - REAL  
CLARIFICATION OF INTERPHONE STATION LOCATIONS

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Clarification of Interphone Station Locations), based upon MCL 62,012. Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*JSC* *1/16/61*  
HBD:ha

Log No. 751

*D. H. Digges*  
707 D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES  
20 February 1961

No. 20  
Model 30-8

Reference (a) Sales Order #600-8-27 dated 15 February 1961  
(b) MCL-CPO #62,012  
(c) CCP #18

CONVAIR 990 - REAL  
CLARIFICATION OF INTERPHONE STATION LOCATIONS  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), Specification Administrative Change (Clarification of Interphone Station Locations), based upon MCL 62,012 Reference (b).

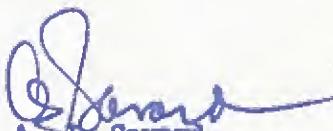
Description of Change

Page 84, Paragraph 3.17.2.3.4 - SERVICE INTERPHONE:

Revise the third sentence to read as follows:

"Pilot compartment (centrally located), cabin attendants' stations, station at each engine pod, nose wheel well, main wheel wells, aft left hand lavatory, fuselage tail cone, hydraulic compartment, drinking water tank area, at the antenna tuner location in the vertical tail and at the external electrical power receptacle".

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

cas

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 13 February 1961

SO No: 600-8-26

Reference: (a) REAL Letter, ER 22/61,  
dated 9 February 1961  
(b) CCP No. 26  
(c) MCL 62,017

WO No: 31,000 Series

CONVAIR 990 - REAL  
REPLACE FLIGHT ILLUSTRATION AND CHANGE CABIN THERMOMETER FROM F. TO C.

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Replace Flight Illustration and Change Cabin Thermometer from F. to C.), based upon MCL 62,017, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

75C 11/11/61  
HBD:hs

Log No. 738

7/7 D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

No. 21

27 February 1961

Model 30-8

Reference (a) Sales Order 600-8-26 dated 13 February 1961  
(b) MCL 62,017  
(c) CCP #26

SPECIFICATION ADMINISTRATIVE CHANGE  
CONVAIR 990 - REAL

REPLACE FLIGHT ILLUSTRATION AND CHANGE CABIN THERMOMETER FROM F. TO C.

REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MCL 62,017, Reference (b).

Description of Change:

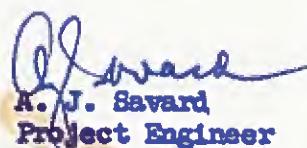
Page vii, Airplane in Flight Illustration

Replace above illustration in specification with revised illustration.

Page 110, Paragraph 3.20.1.10.2 TEMPERATURE INDICATION:

In the last sentence, change "F." to "C."

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Savard  
Project Engineer

ccas

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 2 February 1961

SO No: 600-8-25

Reference: (a) REAL Letter, FR 20/61  
dated 1 February 1961  
(b) CCP No. 24  
(c) MCL 62,015

WO No: 31,000 Series

CONVAIR 990 - REAL  
CHANGE DRIP STICK CALIBRATION FROM POUNDS TO INCHES

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Change Drip Stick Calibration From Pounds to Inches), based upon MCL 62,015, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

yfe

1/17/61  
HBD:md

Log No: 630

PH

*H. Bushworth*  
7<sup>th</sup> D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

No. 19

REAL MINUTES

Model 30-8

Reference: (a) S.O. 600-8-25 dated 2 February 1961  
(b) CCP No. 24  
(c) MCL 62,015

CHANGE DRIP STICK CALIBRATION FROM POUNDS TO INCHES -- SPECIFICATION  
ADMINISTRATIVE CHANGE

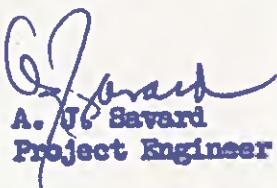
REAL has accepted, as evidenced by Reference (a), Convair's proposal, Reference (b), based upon MCL 62,015, Reference (c):

Description of CHANGE:

Page 41, Paragraph 3.12.9.9.3 DRIP STICKS:

In the second line, change "pounds" to "inches."

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS:JMC/mn

RECEIVED  
FEB 10 '61  
PROJECT  
SPEC  
GROUP

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 27 January 1961

SO No: 600-8-24

Reference: (a) REAL Letter, FR 16/61,  
dated 24 January 1961  
(b) CCP No. 25  
(c) MCL 62,016

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO LAVATORY LIGHTING LANGUAGE  
AND CORRECTION TO X-BAND ANTENNA PART NUMBER

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to Lavatory Lighting Language and Correction to X-Band Antenna Part Number), based upon MCL 62,016, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*gsc*  
HBD:md

*lma* Log No: 541

*H. H. Dugge*  
for D. H. Dugge  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)  
7 February 1961  
REAL S/A MINUTES

No. 18

Model 30-6

Reference: (a) S.O. 600-8-24 dated 27 January 1961  
(b) CCP No. 25  
(c) MCL 62,016

REVISION TO LAVATORY LIGHTING LANGUAGE and CORRECTION TO X-BAND ANTENNA P/N

Real has accepted, as evidenced by Reference (a), Convair's proposal, Reference (b) - Specification Administrative Change, based upon MCL 62,016, Reference (c).

The change is as follows:

Page 68, Paragraph 3.16.8.3.5 LAVATORY LIGHTING:

Revise second sentence as follows:

From: "Valance lights shall be controlled by an 'OFF-ON' switch at the cabin attendant's panels."

To: "All lavatory lights, including valance lights, shall be controlled by an 'OFF-ON' switch at the cabin attendants' panels."

Add the following sentence to the end of the paragraph:

"The control switch for mirror lighting shall be provided with a sheet metal slide, on each upper door jamb extrusion, to hold this switch in the 'ON' position when the door is open."

Page A-11, APPENDIX I-C, ELECTRONICS EQUIPMENT:

Revise the below item under "WEATHER RADAR" as follows:

From: "1 Antenna Assy (30-inch dish) Bendix ANT-1D"

To: "1 Antenna Assembly (30-inch dish, X-Band) Bendix ANT-1E-B"

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS:JMC/mjs

CONVAIR - San Diego

ACCOUNTING SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes Aerovias  
Brazil S/A  
Sao Paulo, Brazil

Date: 13 January 1961  
SO No: 600-8-23  
WO No: 31,000 Series

CONVAIR 990 - REAL

CHANGE ORDER No. 5

(1) Attached is a copy of Change Order No. 5 signed by REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A, which amends Detail Specification Report No. ZD-30-008, dated 2 May 1960, to incorporate the Specification Change Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11, set out in Paragraph VI of said Change Order.

REC:ha

Log No: 397

*1173*  
D. H. Digges  
Manager of Contracts

cc: (all with attachment)  
Arthur Anderson & Co.  
R. F. Ashe  
G. H. Blain  
G. T. Bovas  
E. Burke (w/exco. copy)  
D. C. Barrows  
D. H. Digges  
J. D. Eiland  
R. D. Evans  
R. W. Harper (w/attach.-2)  
A. L. Hendricks  
R. R. Hoover

W. J. Jason  
E. A. Kayes  
V. S. Mathews  
C. L. Meador (w/attach.-2)  
A. G. Rothlisberg  
C. C. Sawyer  
T. J. Sullivan  
R. K. Waldo  
R. D. Watts  
J. G. Zevaly  
F. S. Chambers  
Change Order No. 5  
Sales Order File

CHANGE ORDER NO. 5

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
and General Dynamics Corporation (Convair Division)

I. The Detail Specification Report ZD-30-008 is hereby amended to reflect certain changes all as more particularly set forth in Specification Change Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11, Commercial Change Proposal Summary No. 1 and Specification Revision Pages dated 15 November 1960 attached hereto and made a part hereof.

II. Airplanes Affected:

Undelivered - 3

III. Effect on weight and balance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 1 attached.

IV. Effect on performance:

As reflected in the Specification Changes and Commercial Change Proposal Summary No. 1 attached.

V. Effect on delivery:

None

VI. This Change Order results in the following charges and/or credits:

A. Change No. 2 - Modification of Engine Fan Anti-Icing System (Page 111)	No Charges or Credits
B. Change No. 3 - Relocation of Fan Tachometer, Pressure Ratio and Exhaust Temperature Indicators; and Addition of Overspeed Warning Lights (Pages 34, 47a, 48, and A-6)	No Charges or Credits
C. Change No. 4 - Revision to Oxygen System Illustration (Page 104a)	No Charges or Credits
D. Change No. 5 - Revision to P/N of Bendix P. A. Amplifier (Page A-11)	No Charges or Credits

## CHANGE ORDER NO. 5

pursuant to  
 Article 5 of Purchase Agreement dated 12 August 1957  
 by and between  
 REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brazil S/A  
 and General Dynamics Corporation (Convair Division)

- E. Change No. 6 - Revision to Inter-changeable and Replaceable Parts (Page 117) No Charges or Credits
- F. Change No. 7 - Revision to C. G. Limits Graph (Page 6a) No Charges or Credits
- G. Change No. 8 - Delete Headrest and Footrest on Aft Facing Seat (Page 91) No Charges or Credits
- H. Change No. 9 - Powered Rudder and Additional Lateral Control, Installation of (Pages 3a, 12, 17, 28, 29, and 55a) No Charges or Credits
- I. Change No. 10 - Main and Nose Gear Tires, Change to Goodyear (Page A-13) No Charges or Credits
- J. Change No. 11 - Cargo Compartment Tie-Down Rings (Page 96) No Charges or Credits

VII. The attached Commercial Change Proposal Summary No. 1 and revised Specification Pages dated 15 November 1960 are hereby incorporated into and become a part of Detail Specification Report No. ZD-30-008 dated 2 May 1960.

VIII. Except as herein modified all provisions of the Purchase Agreement and the Detail Specification shall remain in effect.

GENERAL DYNAMICS CORPORATION

By: /s/ F. S. ChambersTitle: Chief of Contract Administration

Accepted and Agreed to as of  
 this 27 day of December 1960.

REAL S/A - TRANSPORTES AEREOS

By: /s/ Eduardo M. AlvarengaTitle: Director

EMPRESA DE TRANSPORTES AEROVIAS BRAZIL S/A

By: /s/ Eduardo M. AlvarengaTitle: Director

Convair - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aéreos  
and Empresa de Transportes  
Brazil S/A

Date: 12 January 1961.

SO No: 600-8-22

Reference: (a) REAL Letter, FR 10/61,  
dated 11 January 1961  
(b) CCP No. 22  
(c) MCL 62,092  
(d) Convair initiated

WO No: 31,000 Series

CONVAIR 990 - REAL  
HORIZONTAL STABILIZER MECHANICAL MOTION INDICATOR SYSTEM, INSTALLATION OF

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Horizontal Stabilizer Mechanical Motion Indicator System, Installation of, based upon MCL 62,092, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 6 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

*TS*  
HBD:hs

Log No: 285

*H. H. Dugge*  
To D. H. Dugge  
Manager of Contracts

CONVAIR  
A Division of General Dynamics Corporation  
(San Diego)

19 January 1961

No. 16

REAL MINUTES

Model 30-8

Reference: (a) S. O. 600-8-22 dated 12 January 1961  
(b) CCP No. 22  
(c) MCL 62,092

HORIZONTAL STABILIZER MECHANICAL MOTION INDICATOR SYSTEM, INSTALLATION OF

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b), based upon MCL 62,092, Reference (c).

Incorporation of this change results in an increase of 6 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

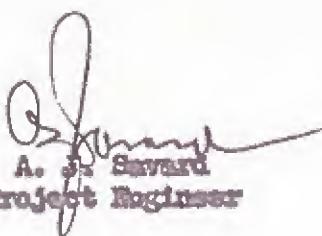
Description of Change:

Page 29, Paragraph 3.10.1.5 STABILIZER SYSTEM:

Add the following to the end of the paragraph:

"A horizontal stabilizer mechanical motion indicator system with audible warning in the pilot compartment, shall be installed to indicate stabilizer trim in-transit due to component failure in the stabilizer trim system."

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Seward  
Project Engineer

AJS/JMC/djb

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil, S/A

Date: 12 January 1961

SO No: 600-8-21

Reference: (a) REAL Letter, MAH-524/60,  
dated 30 December 1960  
(b) CCP No. 21  
(c) MCL 62,091  
(d) Convair initiated

WO No: 31,000 Series

CONVAIR 990 - REAL  
PILOT AND COPILOT SEATS, CHANGE TO

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Pilot and Copilot Seats, Change to, based upon MCL 62,091, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference: (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*gjg/SC*  
HBD:ha

Log No: 310

*H. H. Dugge*  
D. H. Dugge  
Manager of Contracts

CO N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

24 January 1961

No. 17

REAL MINUTES

Model 30-8

Reference: (a) S. O. 600-8-21 dated 12 January 1961  
(b) CCP No. 21  
(c) MCL 62,091

PILOT AND COPILOT SEATS, CHANGE TO

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,091, Reference (c).

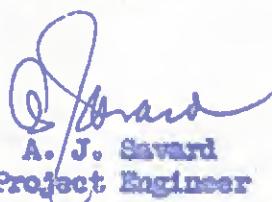
Description of Change:

Page A-14, APPENDIX I-C, FURNISHINGS:

Revise the below items under "Description" as follows:

<u>From:</u>	"1 Seat, Pilot (Including Fabric, Belt and Harness)	Convair Dwg. 30-98504-1
	1 Seat, Copilot (Including Fabric, Belt and Harness)	Convair Dwg. 30-98504-2"
<u>To:</u>	"1 Seat, Pilot (Including Fabric, Belt and Harness)	Weber 801135-607/ 803807
	1 Seat, Copilot (Including Fabric, Belt and Harness)	Weber 801136-607/ 803807"

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS/JMC/db

CONVAIR - SAN DIEGO

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 5 April 1961

SO No: 60004-21

Reference: (a) REAL Letter, FR 76/61,  
dated 3 April 1961  
(b) CCP No. 30  
(c) MCL 62,020

WO No: 31,000 Series

*RECE*

*NOV 15*

*PROJEC  
SPEC.  
GROUP*

CONVAIR 990 - REAL  
DELETION OF AFT ENGINE FAN ANTI-ICING SYSTEM

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (1), Specification Administrative Change (Deletion of Aft Engine Fan Anti-icing System), based upon MCL 62,020, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*1174-1*

Rec'd:

Loc. No: 144

*F. S. Chambers*  
F. S. Chambers  
Manager of Commercial Contracts

CONVAIR-SAN DIEGO/CONVAIR DIVISION OF GENERAL DYNAMICS CORPORATION

REAL MINUTES

No. 26

17 April 1961

Model 30-5  
26-38

Reference (a) Sales Order 600-8-20 dated 5 April 1961  
(b) MEL 62,020  
(c) CCP #30

CONVAIR 990 - REAL  
DELETION OF AFT ENGINE FAN ANTI-ICING SYSTEM  
SPECIFICATION ADMINISTRATIVE CHANGE

REAL is accepted, as evidenced by Reference (a), Convair's proposal, Reference (c), based upon MEL 62,020, Reference (b).

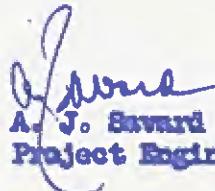
Description of Change:

Page 111, Paragraph 3.20.2.1 ANTI-ICING OF NONTRANSPARENT AREAS:

Delete the next to the last sentence in the paragraph which reads as follows:

"An "ON-OFF" switch shall be provided to isolate each aft fan anti-icing system from the engine bleed air during takeoff, climb and cruise conditions."

ACTION: Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.

  
A. J. Sevard  
Project Engineer

AJS:JMC:cas

*7-7-60*  
CONVAIR - San Diego

SALES ORDER 6-122

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil S/A

Date: 12 December 1960

SO No: 600-8-18

Reference: (a) REAL Letter, MAN-483/60,  
dated 1 December 1960  
(b) CCP No. 17  
(c) MCL 62,011  
(d) Convair initiated

WO No: 31,000 Series

CONVAIR 990 - REAL  
REVISION TO EXTERNAL SERVICE POWER SYSTEM LANGUAGE

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to External Service Power System Language), based upon MCL 62,011, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the changes outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*SP* HHD:ha

Log No: 2200

*H. H. Digges*  
H. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

19 December 1960

No. 15

REAL MINUTES

Model 30-8

Reference: (a) S. O. No. 600-8-18 dated 12 December 1960  
(b) CCP No. 17  
(c) NCL 62,011

SPECIFICATION ADMINISTRATIVE CHANGE  
REVISION TO EXTERNAL SERVICE POWER SYSTEM LANGUAGE

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon NCL 62,011, Reference (c).

Description of Change:

Page 70, Paragraph 3.16.8.3.10 - EXTERNAL SERVICE POWER SYSTEM:

Revise the first sentence to read as follows:

"It shall be possible to energize certain interior lighting, oil quantity indicators, refueling controls and indicators from the external power source without the necessity of energizing the power distribution system in the aircraft".

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

*A. J. Soward*  
A. J. Soward  
Project Engineer

AJS/JMC/djb

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 15 November 1960

SO No: 600-8-17

Reference: (a) REAL Letter, MAE-443/60,  
dated 3 November 1960  
(b) CCP No. 13  
(c) MCL 62,009  
(d) Convair initiated

WO No: 31,000 Series

CONVAIR 990 - REAL

ALTERNATE CONTROL CABLE MATERIAL

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrativa Change (Alternate Control Cable Material), based upon MCL 62,009, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification page to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

HRD:hs

LOG NO: 3215

For D. H. Digges  
Manager of Contracts

*H. H. Dugge*

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

23 November 1960

No. 13

REAL MINUTES

Model 20-8

Reference: (a) Sales Order 600-8-17  
(b) CCP. No. 13  
(c) MCL 62,009

ALTERNATE CONTROL CABLE MATERIAL

SPECIFICATION ADMINISTRATIVE CHANGE

REAL Airlines has accepted, as evidenced by Reference (a), our proposal Reference (b), based upon MCL No. 62,009, Reference (c).

DESCRIPTION OF CHANGE:

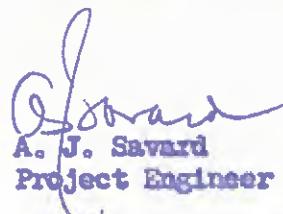
Page 28, Paragraph 3.10.1.1.1 CABLES, FITTINGS AND CONNECTIONS

Revise the first sentence as follows:

FROM: "Preformed tinned or corrosion resistant cable shall be used for all flexible cable controls."

TO: "Preformed galvanized, tinned or corrosion resistant cable shall be used for all flexible cable controls."

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS/JMC/jcp

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A -- Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 15 November 1960

SO No: 600-8-16

Reference: (a) REAL Letter MAN-445/60  
dated 7 November 1960  
(b) CCP No. 12  
(c) MCL 62,008  
(d) Convair initiated

WO No: 31,000 Series

CONVAIR 600 - REAL

STRUCTURAL DESIGN SPEED LIMIT FOR FLAP AND LEADING EDGE DEVICE  
OPERATION WITH SINGLE HYDRAULIC SYSTEM OPERATING

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Structural Design Speed Limit for Flap and Leading Edge Device Operation with Single Hydraulic System Operating), based upon MCL 62,008, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect of aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*zfe*  
HHD:ha

Log No: 3216

*MD*  
70 D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

No. 14

23 November 1960

REAL MINUTES

Model 30-8

Reference: (a) Sales Order 600-8-16  
(b) CCP No. 12  
(c) MCL 62,008

SPECIFICATION ADMINISTRATIVE CHANGE

STRUCTURAL DESIGN SPEED LIMIT FOR FLAP AND LEADING EDGE DEVICE  
OPERATION WITH SINGLE HYDRAULIC SYSTEM OPERATION

REAL Airlines has accepted as evidenced in Reference (a) our proposal, Reference (b), based upon MCL No. 62,008, Reference (c).

DESCRIPTION OF CHANGE

Page 30, Paragraph 3.10.2.1 LIFT AND DRAG INCREASING DEVICE SYSTEMS:

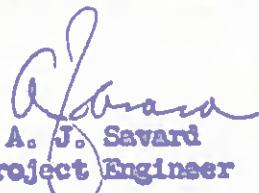
Revise the fifth sentence as follows:

From: "Full trailing edge flap deflection and leading edge device extension shall be obtainable from either hydraulic system."

To: "Full extension and retraction of flaps and leading edge devices shall be obtainable at structural design speeds with both hydraulic systems operating. With either hydraulic system operating singly, flap extension and retraction shall be possible at the following IAS, including leading edge device operation:

20°	at 230 knots
30°	at 210 knots
40°	at 190 knots
50° +0° -3°	at 170 knots

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order 1 Date.

  
A. J. Savard  
Project Engineer

AJB/JMC/jcp

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil S/A

Date: 7 November 1960

SO No: 600-8-15

WO No: 31,000 Series

Reference: (a) Convair Letter 11-2-3859  
dated 15 July 1960  
(b) Amendment No. 5 to Purchase Agreement  
by and between General Dynamics  
Corporation (Convair Division) and  
REAL S/A - Transportes Aereos and  
Empresa de Transportes Aerovias  
Brasil S/A

CONVAIR 990 - REAL

AMENDMENT NO. 5

(1) Under the Purchase Agreement, Article 11 on Page 11F, Section (e)(2), Sub-section (aa), Convair agreed to supply REAL the following:

(1) 2 blueprint copies of each drawing from which the first aircraft is manufactured and revisions and replacements for such drawings as required due to changes in subsequent aircraft during manufacture.

Reference (a) letter covered the transmittal of Amendment No. 5 to the Convair/REAL Purchase Agreement which proposed the deletion of the above mentioned drawings while substituting in lieu thereof one (1) set of microfilm integrated drawings consisting of all components, main assemblies and installations. REAL has agreed to this Amendment to the Purchase Agreement as evidenced by the execution of Reference (b).

(2) The microfilm integrated drawings are to be supplied concurrently with initial spares procurement documents, as set forth in Article 4(a) of the Purchase Agreement with revisions thereto until delivery of the last aircraft.

(3) All departments concerned are authorized to proceed accordingly.

28  
HBD:bs

Log No: 3110

11/11/61  
H. H. Dugge  
for D. H. Dugge  
Manager of Contracts

RECEIVED  
11/11/61  
PROJECT  
SPEC.  
GROUP

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brasil S/A

Date: 2 November 1960

SO No: 600-8-14

Reference: (a) Sales Order 600-8-1  
(b) Revised Amendment No. 4 to REAL  
Purchase Agreement dated 23  
June 1960.  
(c) REAL Letter, MAH-419/60, dated  
13 October 1960.

WO No: 31,000 Series

OFFICE FACILITIES FOR REAL

- (1) A representative of REAL has been assigned office space in Room L, Building 19, Customer Representatives Office. His telephone extension will be 1269.
- (2) Said representative is authorized to place telephone calls, send telegrams and to send mail through the existing facilities. The charges for telephone calls and telegrams are to be accumulated by Office Services on a monthly basis, if possible, and submitted to the Accounting Department.
- (3) Accounting Department is authorized to bill REAL for these charges. Such billings are to be submitted to Commercial Contracts, Room 100, Building 19, for transmittal to the customer.

Log No. 3079

For D. H. Diggles  
Manager of Contracts

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 19 October 1960

SO No: 600-8-13

Reference: (a) REAL Letter MAN-415/60  
dated 11 October 1960  
(b) CCP No. 10  
(c) MCL 62,087

WO No: 31,000 Series

CONVAIR 600 - REAL

MAIN AND NOSE GEAR TIRES, CHANGE TO GOODYEAR

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Main and Nose Gear Tires, Change to Goodyear, based upon MCL 62,087, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 91 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

*BL*  
*44*  
*75*  
*75*  
*75*  
*75*

HBD:hs

Log No: 2988

*W.M. Duckworth*  
707 D. H. Digges  
Manager of Contracts

CONVAIR  
A Division of General Dynamics Corporation  
(San Diego)

No. 11

2 November 1960

Model 30-8

REAL MINUTES

Reference: (a) S. O. 600-8-13 dated 19 October 1960  
(b) CCP No. 10  
(c) MCL 62,087

MAIN AND NOSE GEAR TIRES, CHANGE TO GOODYEAR

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,087, Reference (c).

Incorporation of this change results in an increase of 91 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

Description of Change:

Page A-13, APPENDIX I-C, LANDING GEAR EQUIPMENT:

Revise the below items under "Description" as follows:

From:	"8 Tires, Main Wheel (41 x 15-18) (Tread depth .38, 200 mi/hr)	Type VIII 22 PR
	2 Tires, Nose Wheel (29 x 7.7) (Tread depth .32, 200 mi/hr)	Type VII 16 PR"
To:	"8 Tires, Main Wheel (41 x 15-18) Goodyear (Tread depth .38, 200 mi/hr)	Type VIII 22PR
	2 Tires, Nose Wheel (29 x 7.7) Goodyear (Tread depth .32, 200 mi/hr)	Type VII PR16"

Delete the note on bottom of Page A-13 which reads:

"Manufacturer's weight empty guarantee includes tire vendor's weight selected by Convair."

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Seward  
Project Engineer

AJB/JMC/dr

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Date: 18 October 1960

SO No: 600-8-12

Reference: (a) REAL Letter MAN-414/60  
dated 11 October 1960  
(b) CCP No. 9  
(c) MCL 62,086

WO No: 31,000 Series

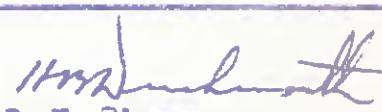
CONVAIR 600 - REAL

POWERED RUDDER AND ADDITIONAL LATERAL CONTROL, INSTALLATION OF

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Powered Rudder and Additional Lateral Control, Installation of, based upon MCL 62,086, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 298 pounds per aircraft. There is no effect on delivery schedules.

HRD:hs

Log No. 2983

  
70<sup>th</sup> D. H. Biggs  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

26 October 1960

No. 10  
Model 30-8

REAL MINUTES

Reference: (a) S. O. 600-8-12 dated 18 October 1960  
(b) CCP No. 9  
(c) MCL 62,086

POWERED RUDDER AND ADDITIONAL LATERAL CONTROL, INSTALLATION OF

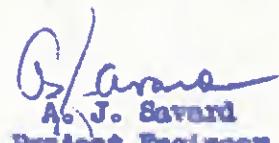
REAL has accepted as evidenced by Reference (a), our proposal, Reference (b), based upon MCL 62,086, Reference (c).

Incorporation of this change results in an increase of 298 pounds per aircraft. There is no effect on delivery schedule.

This change is to provide a full powered rudder in lieu of a power boost rudder; and to provide additional lateral control by increase of outboard spoiler span for REAL and is identical to the change as accomplished on the American and Swissair versions.

For complete description, see CCP No. 9.

ACTION All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS/JMC:dr

CONVAIR - San Diego

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Reference: (a) REAL Letter MAN-360-60  
dated 15 September 1960  
(b) CCP No. 3  
(c) MCL 62,085

SALES ORDER

Date: 29 September 1960

SO No: 600-8-11

WO No: 31,000 Series

CONVAIR 600 - REAL

RELOCATION OF FAN TACHOMETER, PRESSURE RATIO AND EXHAUST  
TEMPERATURE INDICATORS; AND ADDITION OF OVERSPEED WARNING LIGHTS

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Relocation of Fan Tachometer, Pressure Ratio and Exhaust Temperature Indicators; and addition of Overspeed Warning Lights, based upon MCL 62,085, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 1 $\frac{1}{4}$  pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

*ASL*  
HBD:hs

Log No. 2756

*H. D. Digges*  
For D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

3 October 1960

No. 9

REAL MINUTES

Model 30-8

Reference: (a) S. O. 600-8-11 dated 29 September 1960  
(b) CCP No. 3  
(c) MCL 62,085

RELOCATION OF FAN TACHOMETER, PRESSURE RATIO AND EXHAUST  
TEMPERATURE INDICATORS; AND ADDITION OF OVERSPEED WARNING LIGHTS

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b), based upon MCL 62,085, Reference (c).

Incorporation of this change results in an increase of 14 pounds per aircraft. There is no effect on aircraft performance or delivery schedule.

Description of Change:

Page 34, Paragraph 3.12.4 3 TACHOMETER GENERATORS:

Add the following to the end of the paragraph:

"A warning light shall be installed on the pilots' center instrument panel for each fan tachometer to indicate overspeeding."

Page 47a, PILOT'S AND COPILOT'S INSTRUMENT PANEL:

Above illustration will be revised to show pressure ratio indicators in the position now occupied by the exhaust temperature indicators, and the exhaust temperature indicators in the position now occupied by the fan tachometer indicators.

Page 48, Paragraph 3.14.1.3 CENTER PANEL INSTRUMENTS:

Delete the below item from the instrument list:

"\*Four engine fan tachometer indicators"

Add the following item to the instrument list:

"\*Four pressure ratio indicators"

Page 48, Paragraph 3.14.1.4 FLIGHT ENGINEERS INSTRUMENTS:

Delete the below item from the instrument list:

"Four thrust indicators"

Add the following item to the instrument list:

"Four engine fan tachometer indicators"

## Page A-6, APPENDIX I-C, INSTRUMENTS AND RELATED EQUIPMENT:

Revise the below items under "ENGINE INSTRUMENTS - GENERAL" as follows:

From: "4 Indicator, Thrust"

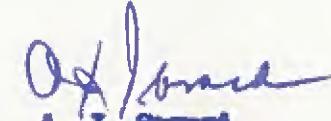
To: "4 Indicator, Pressure Ratio U. S. Gauge SRL-015G"

Delete the asterisk before "4 Indicator, Tachometer (Pan)"

Add the following item to the instrument list:

"4 Transmitter, Pressure Ratio System Minneapolis-Honeywell 1G14C7"

**ACTION:** All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.



A. J. Steward  
Project Engineer

AJS:JMC:dr

CONVAIR - San Diego

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Reference: (a) REAL Letter MAN-374/60  
dated 22 September 1960  
(b) CCP No. 11  
(c) MCL 62,007

SALES ORDER

Date: 29 September 1960

SO No: 600-8-10

WO No: 31,000 Series

CONVAIR 600 - REAL

CARGO COMPARTMENT TIE-DOWN RINGS

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Cargo Compartment Tie-Down Rings), based upon MCL 62,007, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) Incorporation of this change results in an increase of 12 lbs. per aircraft. There is no effect on aircraft performance or delivery schedule.

*YJC*  
HAD:hs

Log No: 2755

*D. H. Digges*  
D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corp.  
(San Diego)

3 October 1960

Min. No. 8

Model 30-8

REAL MINUTES

Reference (a) S. O. 600-8-10 dated 29 September 1960  
(b) CCP No. 11  
(c) MCL 62,007

CARGO COMPARTMENT TIE-DOWN RINGS

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,007, Reference (c).

Incorporation of this change results in an increase of 12 lbs. per aircraft. There is no effect on aircraft performance or delivery schedule.

Description of Change:

Page 96, Paragraph 3.19.2.4 LUGGAGE AND CARGO COMPARTMENTS:

Add the following after the first sentence:

"The flooring in both the forward and aft cargo compartments shall be reinforced as required and shall be provided with six each flush-type tie-down rings for securing heavy or uncrated cargo."

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

A. J. Seward  
Project Engineer

AJS:JMC:dr

CONVAIR - San Diego

Sold to: REAL S/A - Transportes Aereos  
and Empresa de Transportes  
Brazil S/A

Sao Paulo, Brazil

SALES ORDER

Date: 9 September 1960

SO No: 600-8-9

WO No: 31,000 Series

Reference: (a) REAL Letter MAN-340/60  
dated 30 August 1960  
(b) CCP No. 8  
(c) MCL 62,006

CONVAIR 600 - REAL

INFLATE HEADREST AND FOOTREST ON AFT FACING SEAT

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Delete Headrest and Footrest on Aft Facing Seat), based upon MCL 62,006, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

SPD:hs

Log No: 2619

  
D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

20 September 1960

No. 7  
Model 30-8

REAL MINUTES

Reference: (a) S. O. 600-8-9 dated 9 September 1960  
(b) CCP No. 8  
(c) NCL 62,006

DELETE HEADREST AND FOOTREST ON AFT FACING SEAT

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b), based upon NCL 62,006, Reference (c).

Description of Change:

Page 91, Paragraph 3.19.1.1.6 PASSENGER SEATS

Revise the 13th sentence as follows:

From: "A standard and a wide ratchet-type footrest shall be provided for each first class double seat,

To: "A standard and a wide ratchet-type footrest shall be provided for each first class double seat, except the forwardmost left hand aft facing double seat."

Revise the 17th sentence as follows:

From: "All first class seats shall be provided with adjustable headrests."

To: "All first class seats shall be provided with adjustable headrests, except the forwardmost left hand aft facing double seat."

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

*F. Herbert Sharp*  
F. H. Sharp  
Project Engineer

FHS:JMC:dr

CONVAIR - San Diego

Sold to: REAL S/A - Transportes Aereos  
and Empresas de Transportes  
Brazil S/A  
  
Sao Paulo, Brazil

Reference: (a) REAL Letter MAN-337/60  
dated 30 August 1960  
(b) CCP No. 5  
(c) MCL No. 62,003

SALES ORDER

Date: 9 September 1960  
SO No: 600-8-8  
WO No: 31,000 Series

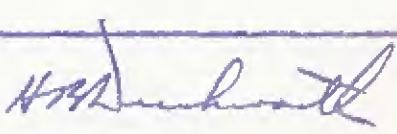
CONVAIR 600 - REAL

REVISION TO P/N OF BENDIX P.A. AMPLIFIER

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to P/N of Bendix P.A. Amplifier), based upon MCL 62,003, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

HRD:ha

Log No: 2620

  
D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

20 September 1960

No. 6  
Model 30-8

REAL MINUTES

Reference: (a) S. O. No. 600-8-8 dated 9 September 1960  
(b) CCP No. 5  
(c) MCL No. 62,003

REVISION TO P/N OF BENDIX P.A. AMPLIFIER

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,003, Reference (c).

Description of Change:

Page A-11, APPENDIX I-C, ELECTRONIC EQUIPMENT:

Revise the below item under "P.A. SYSTEM" as follows:

From: "1 Pass. Address Amplifier      Bendix      AMA-10A"  
To:      "1 Pass. Address Amplifier      Bendix      AMA-10B"

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

*F. Herber Sharp*  
F. H. Sharp  
Project Engineer

FBS:JMC:dr

CONVAIR - San Diego

Sold to: REAL S/A - Transportes Aereos and  
Empresa de Transportes Aerovias  
Brasil S/A  
Sao Paulo, Brasil

Reference: (a) REAL Letter NAN-318/60  
dated 19 August 1960  
(b) CCP No. 7  
(c) MCL No. 62,005

SALES ORDER

Date: 30 August 1960

SO No: 600-8-7

WO No: 31,000 Series

CONVAIR 600 - REAL

REVISION TO C. G. LIMITS GRAPH

- (1) REAL has accepted by Reference (a), Convair's proposal, Reference (b), Specification Administrative Change (Revision to C. G. Limits Graph), based upon MCL 62,005, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*7/8/60*  
*6/19/60*  
*1/1/60*  
*HBH:ha*

Log No: 2530

*1/1/60*  
for *D. H. Digges*  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

9 September 1960

No. 5

Mod. 30-8

REAL MINUTES

Reference: (a) S. O. 600-8-7 dated 30 August 1960  
(b) CCP No. 7  
(c) MCL No. 62,005

REVISION TO C.G. LIMITS GRAPH

REAL has accepted as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,005, Reference (c).

Description of change:

Page 6a - C. G. DESIGN LIMITS:

Replace above illustration in specification with copy of Page 6a - C. G. LIMITS which adds new aft takeoff C. G. limit.

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

AJS:JMC:dr

*A. J. Savard*  
A. J. Savard  
Project Engineer  
*J. F. H. Sharp.*

~~1178~~  
CONVAIR - San Diego

SALES ORDER

6-122

Sold to: REAL S/A - Transportes Aéreos and  
Empresa de Transportes Aerovias Brasil S/A  
Sao Paulo, Brasil

Date: 18 August 1960  
SO No: 600-8-6

Reference: (a) CCP No. 6  
(b) MCL No. 62,004

WO No: 31,000 Series

CONVAIR 600 - REAL

REVISION TO INTERCHANGEABLE AND REPLACEABLE PARTS

- (1) REAL has accepted Convair's proposal, Reference (a), Specification Administrative Change, Revision to Interchangeable and Replaceable Parts, based upon MCL 62,004, Reference (b). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (b).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*[Signature]*  
REB:hs

Log No: 2377

*[Signature]*  
T-1 D. H. Digges  
Manager of Contracts

CONVAIR  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

No. 4  
Mod. 30-8

9 September 1960

Reference: (a) S. O. 600-8-6 dated 18 August 1960  
(b) CCP No. 6  
(c) MCL No. 62,004

REVISION TO INTERCHANGEABLE AND REPLACEABLE PARTS

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL No. 62,004, Reference (c)

Description of Change:

Page 117, Paragraph 3.23.2 EQUIPMENT INTERCHANGEABILITY:

Revise the following item under "a. Interchangeable Parts (Cont)" as follows:

From: "Crew and Passenger Seat and Back Cushions and Arm Rest Covers"  
To: "Crew Seat Bottom Cushions  
Passenger Seat Bottom Cushions and Arm Rest Caps"

Revise the below item under "b. Replaceable Parts" as follows:

From: "All Doors and Covers not specifically listed as interchangeable"

To: "All Access Doors or Covers not specifically listed as interchangeable"

Delete the below item from "B. Replaceable Parts":

"Access Panels"

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification page to the Contracts Department within four weeks of Sales Order date.

AJS:JC:dr

*A. J. Savard*  
A. J. Savard  
Project Engineer  
*for F. H. Thompson*

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and  
Empresa de Transportes Aerovias Brasil S/A  
Sao Paulo, Brasil

Date: 10 August 1960

SO No: 600-8-4

Reference: (a) CCP No. 2  
(b) MCL No. 62,001

WO No: 31,000 Series

CONVAIR 600 - REAL

MODIFICATION OF ENGINE FAN ANTI-ICING SYSTEM

- (1) REAL has accepted Convair's proposal, Reference (a), Specification Administrative Change, Modification of Engine Fan Anti-Icing System, based upon MCL 62,001, Reference (b). Accordingly, all departments concerned are directed to proceed with incorporation of the change outlined in Reference (b).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*ATM*  
HBD:hs

Log No: 2313

*D. H. Digges*  
D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

No. 3  
Model 30-8

REAL MINUTES

Reference: (a) S.O. 600-8-4 dated 10 August 1968  
(b) CCP No. 2  
(c) MEL No. 62,001

MODIFICATION OF ENGINE FAN ANTI-ICING SYSTEM

REAL has accepted Convair's proposal, Reference (a), Specification Administrative Change, Modification of Engine Fan Anti-Icing System, based upon MEL 62,001, Reference (b).

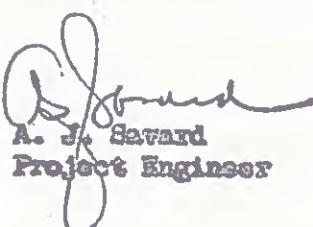
Description of Change:

Page 111, Paragraph 3.20.2.1 - ANTI-ICING OF NONTRANSPARENT AREAS:

Add the following after the next to the last sentence in the paragraph:

"An ON-OFF" switch shall be provided to isolate each off fan anti-icing system from the engine bleed air during takeoff, climb and cruise conditions".

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

  
A. J. Savard  
Project Engineer

AJS:JMC:md

CONVAIR - San Diego

SALES ORDER

Sold to: REAL S/A - Transportes Aereos and  
Empresa de Transportes Aerovias Brasil S/A  
Sao Paulo, Brasil

Date: 10 August 1960  
SO No: 600-8-3

Reference: (a) Letter, Eduardo Alvarenga to H.B. Duckworth, dated 4 August 1960.  
(b) CCP No. 4  
(c) MCL No. 62,002

WO No: 31,000 Series

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CONVAIR 600 - REAL

REVISION TO OXYGEN SYSTEM ILLUSTRATION

- (1) REAL has accepted by Reference (a) Convair's proposal, Reference (b), Specification Administrative Change, Revision to Oxygen System Illustration based upon MCL 62,002, Reference (c). Accordingly, all departments concerned are directed to proceed with incorporation of the change as outlined in Reference (c).
- (2) Engineering Specification Section will forward necessary revised specification pages to the Contracts Department as soon as practicable.
- (3) This change has no effect on aircraft weight empty. There is no effect on aircraft performance or delivery schedule.

*WHD*  
HBD:hs

Log No: 2242

*D. H. Digges*  
D. H. Digges  
Manager of Contracts

C O N V A I R  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

No. 2  
Model 30-8

9 September 1960

Reference: (a) S. O. 600-8-3 dated 10 August 1960  
(b) CCP No. 4  
(c) MCL No. 62,002

REVISION TO OXYGEN SYSTEM ILLUSTRATION

REAL has accepted, as evidenced by Reference (a), our proposal, Reference (b) based upon MCL 62,002, Reference (c).

Description of Change:

Page 104a, GASEOUS OXYGEN SYSTEM:

Replace above illustration in the specification with revised copy - GASEOUS OXYGEN SYSTEM, Page 104a, which shows oxygen facilities for four crew members in lieu of five.

ACTION: All concerned are authorized to proceed with the above. Engineering Specification Section will forward necessary revised Specification pages to the Contracts Department within four weeks of Sales Order date.

JTR:JMC:dr

*A. J. Savard*  
A. J. Savard  
Project Engineer  
*for F H - SHARP.*

*W. J. Brown 6-12*

CONVAIR - San Diego

ACCOUNTING SALES ORDER

Sold to: REAL S/A - Transportes Aereos and  
Empresa de Transportes Aerovias Brasil S/A  
Sao Paulo, Brasil

Date: 23 May 1960

SC No: 600-8-2

WO No: 31,000 Series

CONVAIR 600 - REAL

CHANGE ORDER NO. 4

(1) Attached is a copy of Change Order No. 4 signed by REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A, which amends Detail Specification Report No. ZD-30-010 (Revision 4) dated 1 August 1958, to incorporate the various changes set out in Paragraph VI of said Change Order. Change Order No. 4 cancels Change Orders Nos. 1 through 3 to Detail Specification Report No. ZD-22-001 dated 1 June 1956, revised 22 July 1957. Detail Specification Report No. ZD-22-001 as amended by changes described in Change Order No. 4 is hereby redesignated "Detail Specification Report No. ZD-30-008 dated 2 May 1960".

*This should be ZD-30-010 (Rev 4)*  
*1 August 1958*

HED:shs

Log No. 1592

*H. H. Dinkworth*  
D. H. Digges  
Manager of Contracts

cc: E. Burke (w/exec. copy)  
600 Project Office (w/attach-2)  
Commercial Sales (w/attach)  
H. A. Kayes (w/attach)  
Contracts Staff Section (w/attach)  
J. Doig (w/attach)  
E. E. Johnson (w/attach)  
J. J. Jedke (w/attach)  
W. F. Brown (w/attach-2)

H. R. Kennedy (w/attach)  
Commercial Contracts  
Arthur Anderson & Co. (w/attach)  
Change Order No. 4  
A. J. Braidic  
G. T. Bovee (w/attach)  
T. J. Sullivan (w/attach)  
D. H. Digges (w/attach)  
Sales Order File

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*MAY 31*

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CHANGE ORDER NO. 4,

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

and

Amendment No. 4

to the aforesaid Agreement

*and redesignated as Detail Spec  
ZD-30-008 dated 2 May 1960*

I. The Detail Specification Report No. ZD-30-010 (Revision 4) dated 1 August 1958 is hereby amended to incorporate the various changes set out in Paragraph VI hereof. This Change Order No. 4 cancels Change Orders Nos. 1 through 3 to Detail Specification Report No. ZD-22-001 dated 1 June 1956, revised 22 July 1957. This Change Order is issued to establish the changes to the Detail Specification agreed upon between the parties as of the date hereof in accordance with provisions of Article 5 of the Purchase Agreement entitled "Changes."

II. Airplanes Affected:

Undelivered - 3

III. Effect on weight and balance:

As reflected in the Detail Specification Report No. ZD-30-008 dated 2 May 1960.

IV. Effect on Performance:

None

V. Effect on Delivery:

None

VI. This Change Order results in the following changes with the applicable charges as noted:

A. Installation of supplemental oxygen masks for radio operator/navigation station.

Total Non-recurring Charges	\$ 7,398.00
Recurring Charge per Aircraft	728.00
Total Charges for 3 Aircraft	\$ 9,582.00

CHANGE ORDER NO. 4

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aéreos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

and

Amendment No. 4

to the aforesaid Agreement

---

✓ B. Installation of radio/navigation station.

Total Non-recurring Charges	\$ 28,563.00
Recurring Charge per Aircraft	10,437.00
Total Charges for 3 Aircraft	\$ 59,874.00

✓ C. Installation of cabin rate-of-climb indicator.

Total Non-recurring Charges	\$ 819.00
Recurring Charge per Aircraft	214.00
Total Charges for 3 Aircraft	\$ 1,461.00

✓ D. Installation of oil low pressure warning switches.

Total Non-recurring Charges	\$ 7,890.00
Recurring Charge per Aircraft	148.00
Total Charges for 3 Aircraft	\$ 8,334.00

✓ E. Revise instrument switching system.

Total Non-recurring Charges	\$ 3,161.00
Recurring Charge per Aircraft	465.00
Total Charges for 3 Aircraft	\$ 4,556.00

✓ F. Installation of integrally lit instruments.

Total non-recurring Charges	\$ 21,888.00
Recurring Charge per Aircraft	9,704.00
Total Charges for 3 Aircraft	\$ 51,000.00

✓ G. Installation of bilingual signs (English/  
Portuguese)

Total non-recurring Charges	\$ 7,395.00
Recurring Charge per Aircraft	1,138.00
Total Charges for 3 Aircraft	\$ 10,809.00

CHANGE ORDER NO. 4

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

and

Amendment No. 4

to the aforesaid Agreement

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✓ H. Installation of periscopic sextant provisions.

Total Non-recurring Charges	\$ 6,285.00
Recurring Charge per Aircraft	2,756.00
Total Charges for 3 Aircraft	\$ 14,553.00

✓ I. 75 Gallon tank in lieu of 50 gallon.

Total Non-recurring Charges	\$ 243.00
Recurring Charge per Aircraft	530.00
Total Charges for 3 Aircraft	\$ 1,833.00

✓ J. Installation of REAL requested electronic equipment.

Total Non-recurring Charges	\$ 105,954.00
Recurring Charge per Aircraft	44,172.00
Total Charges for 3 Aircraft	\$ 238,470.00

✓ K. Paint Fin and fuselage top; also REAL markings  
(Enamel paint).

No Charge

✓ L. REAL interior configuration including installation of  
overseas equipment (Provisions for customer furnished  
buffets).

Total non-recurring Charges	\$ 115,518.00
Recurring Charge per Aircraft	17,688.00
Total Charges for 3 Aircraft	\$ 168,582.00

✓ M. Standardization of all main system hydraulic pumps  
(Electrical depressurization and blocking valve).

Total non-recurring Charges	\$ 3,936.00
Recurring Charge per Aircraft	475.00
Total Charges for 3 Aircraft	\$ 5,361.00

✓ N. Improved soundproofing

No Charge

CHANGE ORDER NO. 4

pursuant to

Article 5 of Purchase Agreement dated 12 August 1957  
by and between

REAL S/A - Transportes Aereos and Empresa de Transportes Aerovias Brasil S/A  
and General Dynamics Corporation (Convair Division)

and

Amendment No. 4

to the aforesaid Agreement

0. Summary of the foregoing charges:

Total Non-recurring Charges	\$309,050.00
Total Recurring Charges	265,365.00
Total Charges for 3 Aircraft	<u>\$574,415.00</u>

VII. The Detail Specification Report No. ZD-22-001 dated 1 June 1956 as amended by changes herein described is hereby redesignated "Detail Specification Report No. ZD-30-008 dated 2 May 1960", which shall be delivered to REAL within 30 days after execution of this Change Order. Thereafter all references in the Purchase Agreement to Detail Specification Report No. ZD-22-001 dated 1 June 1956 shall be considered amended to "Detail Specification Report No. ZD-30-008 dated 2 May 1960".

GENERAL DYNAMICS CORPORATION

BY: /s/ B. Coggan

Title: Vice President - Convair Div

Accepted and Agreed to as of

this 17 day of May 1960.

REAL S/A - TRANSPORTES AEREOS

BY: /s/ Eduardo M. Alvarenga

Title: Director

EMPRESA DE TRANSPORTES AEROVIAS BRASIL, S/A

BY: /s/ Eduardo M. Alvarenga

Title: Director

REAL SA - Transportes Aéreos and  
Brasileira De Transportes Aéreos S.A. (BTA) - São Paulo, Brazil

Revised: 21 April 1960  
Date: 7 January 1960  
SO No: 090781

Reference: (a) Amendment No. 4 to REAL Purchase Agreement dated January 1960  
(b) Sales Order No. R&O-14-1

### CONVAIR 600 - REAL

#### SALE OF 3 CONVAIR 600 AIRCRAFT - REAL

(1) Reference (a) Amendment sets forth arrangements for the purchase by REAL of three (3) Convair 600 (Model 303) aircraft in lieu of the three (3) Convair 440 (Model 311) aircraft authorized under Reference (b). Said aircraft are to be manufactured in accordance with Detail Specification Report No. ZD-30-010 (Revision 4) dated 1 August 1958. Said aircraft are scheduled for delivery as follows:

Month of Delivery	Number of Aircraft
March 1961	1
July 1961	1
August 1961	2

(2) This Sales Order authorizes all departments concerned to proceed with the design, release and manufacture of three (3) Convair 600 aircraft pursuant to paragraph (1) above.

(3) This Sales Order will be revised to reflect changes now being negotiated with the contractor.

(4) Changes requested by REAL:

- 75 gallon water tank in lieu of 50 gallon.
- Paint fin and fuselage top; also REAL markings.
- Install supplemental oxygen mask for radio operator/navigator.
- Install radio operator/navigation station in lieu of observers position.
- Install periscope sextant provisions.
- Install integrally lighted instruments on forward instrument panel.
- Install Rignor control rate-of-climb indicator in lieu of Molinari.

1268

D. H. Digges  
Manager of Commercial Contracts

Sold to: REAL S/A-Transportes Aereos and  
Empresa De Transportes Aerovias Brasil S/s Date: 7 January 1960  
Sao Paulo, Brasil  
Revised: 1 April 1960  
Revised: 21 April 1960  
SO No: 600-8-1  
Reference: Same as Page One  
WO No: 31,000 Series

Paragraph (4) (Cont'd)

- Install 4 oil low pressure warning switches similar to 340/440 in lieu of hydraulic electric.
- Install REAL requested electronic equipment (all to be basic).
- Install overseas provisions and equipment (Meat, fruits, liquids).
- Install bilingual signs (English/Portuguese).
- Revise instrument switching system.
- Electrical decompression and blocking valves (Swissair NCL 61,070).
- Revision to noise level guarantees.

Interior Arrangements:

- REAL has requested the seating arrangement as depicted in Convair Drawing ST-31160, as revised.
- All galley equipment is to be customer furnished.
- All seats (first-class and coach) are to be provided with plug-in food tray, as well as normally provided folding food trays. Seats are to have stewardess step on inboard triple seats, 45° reclining on first-class seats, extended arm rests on first-class seats, tape in lieu of buttons for headrest cover attachments. First class seats to have energy absorption and adjustable headrests; all seats to have foot rests (AAL type). Two (2) magazine racks are to be installed in rear compartment and one (1) in forward compartment.

(5) Costs in connection with this Sales Order will be recovered by routine change orders.

*(HMD)* *AS*  
\*Revised to add Paragraphs (4) and (5).

*AS*  
\*\*Revised to add revisions to Paragraph (4). *(HMD)*

CONVAIR  
A Division of General Dynamics Corporation  
(San Diego)

REAL MINUTES

No. 1  
Model. 30-8

13 January 1960

Revised & Rewritten 21 April 1960

Reference: (a) S.O. 600-8-1, dated 7 January 1960, Rev. 21 April 1960  
(b) CPO Serial No. 60-19, dated 1 February 1960, Rev. 6 April 1960  
(c) MCL Serial No. 62,077-1, dated 24 March 1960, Rev. 19 April 1960  
(d) CPO Serial No. 60-19 Addendum I, dated 11 April 1960, Rev.  
21 April 1960

SALE OF 3 CONVAIR 600 AIRCRAFT - REAL

Reference (a) Sales Order sets forth arrangements for the purchase by REAL of three (3) Convair 600 (Model 30) aircraft in lieu of the three (3) Convair 880 (Model 31) aircraft authorized-under-Reference-(a). Said aircraft are to be manufactured in accordance with Detail Specification Report No. ZD-30-010 (Revision 4) dated 1 August 1958. Said aircraft are scheduled for delivery as follows:

<u>Month of Delivery</u>	<u>Number of Aircraft</u>
June 1961	1
July 1961	1
August 1961	1

These Minutes authorize Engineering to proceed with the design and release of three (3) Convair 600 aircraft pursuant to paragraph (1) above. Engineering will process ENO's required for the common release items, the changes listed in Part (B) of reference (b) that are required to conform to Detail Specification ZD-30-010 including Revision No. 4 dated 16 November 1959 and REAL peculiar items as listed in Part (A) of reference (b) and also reference (c) and (d).

Go ahead has been authorized by the Chief Engineer.

FBS:JMC:gn

F. H. Sharp  
Project Engineer



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